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Original Articles.

GERMAN GYNECOLOGICAL NOTES.

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Hofmeier's "*Die Myomotomie*," Martin's "*Ueber die Stielversorgung nach Myomoperationem*," Düvelius's "*Beitrag Sur Lehre von der vaginalen Exstirpation des Uterus*," and Gusserow's "*Erysipelas und Puerperal fieber*" are the latest contributions to special literature among medical circles here. The former deals elaborately with Prof. Schroeder's one hundred completed myomotomies, giving full histories and drawings in many instances, and detailing the different stages in the operation. Out of 21 operations where the uterus was untouched, two died. Of these two the immediate cause of death in *one* was owing to an affection which had nothing to do with the operation; leaving this out of consideration, there was *one* death in 20=5 per cent. Where the uterus was amputated the mortality was 15 per cent. Enucleation of the tumor, either from out the uterus, or from the pelvic connective tissue, was much more serious. Out of 21 such cases 12 died, or a mortality of 57 per cent.

Martin's reprint deals with the treatment of the pedicle, and advocates the use of prophylactic drainage. Out of 32 cases *without* prophylactic drainage the mortality was 34 per cent., of which the deaths by *sepsis* constituted a mortality of 21.9 per cent. Out of 33 cases *with* prophylactic drainage the mortality was 24 per cent.; from sepsis, 12 per cent.

Martin writes: "Ich bin mir sehr wohl aller der Einwände gegen diese Art der Drainage bewusst. Ich weiss vollkommen, dass eine Drainage des ganzen Peritoneum nicht durchführbar ist, dass die Oeffnung in der Regel sich sehr bald verlegt. Wenn ich aber anzunehmen Grund habe, dass die Resorptionskraft des Peritoneum gelitten hat, so will ich durchaus nicht das ganze Bauchfell entlasten, sondern nur den untersten Abschnitt desselben."

Dr. Düvelius (assistant to Dr. Martin) takes up the question of the extirpation of the uterus through the vagina. He, himself, has made the operation four times — *once* for malignant adenoma, and *thrice* for carcinoma of the portio—all recorded. During the last three years Dr. Martin has done 58 such operations, with five deaths (according to Düvelius, though I understood Dr. Martin to say that he had only three deaths).

These fatal cases happened in the early days of this operative procedure, so that such results are simply wonderful. Hofmeier's statistics were: "out of 105 amputations 13 died—12·3 per cent; out of 34 vaginal extirpations 9 died, or 26 per cent" (*Zeitschrift für Geburtshülfe und Gynäk.*, Cd. 10.).

Bokelmann (*Archiv. für Gynäk.*, Bd. 25. H. 1.) reported from the Breslau Klinik 19 vaginal extirpations, with two deaths; five more were reported by Heilbrun (*Centralblatt für Gynäk.*, 1885, No. 5. u. 6) with recovery in each case, so that the mortality in these 14 total extirpations is 8½ per cent. Düvelius contrasts the results of supra-vaginal amputation and total extirpation by placing Hofmeier's and his own statistics side by side:

Hofmeier's supra-vaginal amputation, 12·3 per cent mortality.

Düvelius and Martin, total extirpation, 8·4 " "

Since this time Martin has done some more cases, all of which recovered, so that his mortality is now between six per cent. and seven per cent.

In this same way he contrasts the results after two years, by both operations. There remained well after two years

By the supra-vaginal amputation . . . 32 per cent.

By the vaginal extirpation . . . 33 " "

These results, I think, give much food for contemplation to American gynecologists, and are sources of congratulation for suffering woman-kind.

Dr. Martin's polyclinic furnishes him with an exceptionally large material, and during five weeks just gone by he has completed considerably over 100 operations. His statistics are creeping up to those of Schroeder, whom he may soon pass, and his results are *extremely* good. With such large experience, with such daily association with grave disease, and with such facility of technique, it is not surprising that success should follow him. He arrives at a diagnosis speedily and almost faultlessly, and operates rapidly and with signal coolness. Dr. Düvelius, himself a surgeon of reputation, is his first assistant, another administers the anæsthetic, while another, in conjunction with an intelligent matron, handles the instruments, sponges, etc. Dr. Martin sits between the knees of his patient, and the two assistants are also seated. The galvanized iron operating table invented by the matron has an arrangement by which its middle third can be dropped, thus facilitating the placing of the dressings. Every one looks comfortable, and I am quite impressed with the advantages of this plan. The first assistant sits at the left of the patient, manipulates the abdominal parietes, keeps the intestines out of the cavity, covering them with a hot towel, and secures all bleeding points. The operations in abdominal surgery are all made in a special room, devoted

exclusively to this class of work. It is literally saturated with carbolic spray. All the water used is boiled, and everything and everybody are made as aseptic as possible. The hair of the patient is shaved from the pubes, the abdomen is washed with brown soap and water, then with bichloride solution, and then with lemon juice. The temperature of the room is kept well up, but even a higher grade, I think, might be advantageous. The tumor being removed and the stump being sewn up, the left hand is passed into the cavity behind the stump to the posterior cul-de-sac, the right hand then pushes a long pair of forceps through and into the vagina, an ordinary rubber drainage tube is then pulled through into the peritoneal cavity and left *in situ*. The other end drains into the *vagina*. Not altogether a safe proceeding, it seems to me, but where the results are so good it is hypercriticism to find fault.

His operations for total extirpation are done in another room.

The merit of Martin's procedure is that there ought to be very little blood lost and that the bleeding points can be easily made out and secured.

After making the first or posterior incision the vaginal wall and peritoneum must be firmly united by at least four sutures, and the incision should not be continued until all the bleeding has ceased, then it can be carried around, sutures being made as one advances. The only really difficult part of the operation is in getting hold of the lig. lata and passing the thread. If the uterus should be friable, or if the posterior adhesions are intimate and extensive, there will always be trouble.

Of Dr. Gasserow's and Dr. Landau's practices I have already written so fully (letters in the *Journal of the American Medical Association*) that in attempting anything further I should only be recapitulating. They represent the more conservative element of gynecology, a branch that is rapidly assuming large proportions and which has built up a well earned position among those whose clientele numbers the rich and affluent. I do not know how largely they make use of the many adjuvants which characterize such fashionable practice at home, and whose use is very generally attended with such marked improvement in symptoms, but I do know that they are not so prone to amputate cervixes as many others, and that they believe much in persistent, patient watching, judicious local applications and strict hygienic detail. I have seen both of these gentlemen do many abdominal sections. I have been present at eight ovariectomies by Landau, in all of which I had the honor of assisting; all of which did well, although some of the cases were attended with marked difficulties, the adhesions being general and the pedicle broad and juicy. At Dr. Gasserow's I have also seen a number of laparotomies and a quantity of plastic work, the results of which I do not know exactly, but in a general way I may say they were good. Dr. Gasserow's strong points are diagnosis and pathology in gynecology, and very general excellence as

an obstetrician. His lectures on differential diagnosis and on the evolution of tumors are models.

Why should I speak of Prof. Schroeder, whose reputation is as widespread at home as it is in Europe. As a didactic lecturer he stands without a rival. He enunciates clearly and impresses his own individuality upon everything he says. To unrivalled excellence as an operator he adds the quality, somewhat rare, of a splendid teacher. He operates sitting on the *left* side of his patient, and is assisted by Dr. Hofmeier. Just as at Martin's, so here, everything is done under the fullest antiseptic precautions.

Neither Schroeder, Martin, Landau or Gusserow use a *trocar*, but the contents of cysts are allowed to pour over the rubber sheet covering the patient and drip into a tub placed at the foot of the table. Neither are any especial precautions taken against reduction of temperature, save that at Prof. Gusserow's hot towels are placed on one side of the patient. I do not know that it makes any difference to the patient whether the *trocar* is used or not, but the operation looks better and is more cleanly when it is used. But I do maintain that it is good practice to supplement the heat of the body with hot bottles, and to expose only so much of the trunk as is *absolutely* necessary. Of the value of *strict* antisepsis there is no question in Berlin, and to it, in addition to the dexterity of the operators must be attributed the good results that obtain here. An analysis of the world's statistics, if such could be made, would show a percentage vastly in favor of such usage, for even the limited analysis that I have been able to draw when writing my papers on "American Ovariectomies," and later on "Laparotomy" (*American Journal of Obstetrics*) have convinced me that the operator who neglects to make use of every precaution in an abdominal section commits a serious mistake. In these days of advanced pathology, when our knowledge of wound repair has altered and advanced, with similar changes in our conception of a *contagium vivum*, we cannot afford to sneer, whatever individual good luck we may have had without such precaution. I think no intelligent surgeon will for a moment claim, that mere soap and water will cleanse the hand from the low order of parasitic origin which may cling to it from handling an infected part of the body, from removing stitches from a suppurating wound, or from making an examination of diseased cervix. Experiment has proven conclusively that soap and water will not do this. Knowing this, has any man the right to risk a human life to his super-sensitive prejudices. Much less is it in good taste to belabor with bitter invective those who are more cautious, and perhaps a grain more advanced in scientific research. Take away antiseptic surgery, and see what the results would be. I do not believe that gynecologists here realize the advance position of their specialty in America, and in how many things they could be instructed in our leading Polyclinics. Apart from Emmet and Goodell they know little of

our good men, and of the splendid work they are doing. For this reason I rejoice that an opportunity, in the meeting of the International Congress, will be given them of "liberalizing" their ideas. The amount of material in Germany, especially here in Berlin is simply enormous, and of course the opportunities of examination and of making diagnosis are superb, far ahead of anything of the kind, even in our largest Policlinics. So too, *ex necessitate rei*, the opportunities of personally acquainting one's self with abdominal surgery are many, as such operations are being done constantly. In obstetrical, practical work too, with such enormous material, there must be advantage for superintending and managing a great variety of cases of labor, which the student at home cannot have. In Pathology and Diagnosis the Germans are admirable. But in minor Surgical Gynecology, in Conservative Gynecology (embracing Rest Treatment, Massage, Electricity, and the use of new remedies for limiting pain) in surgical appliance and surgical neatness, and the treatment of misplaced uteri, the gynecologist here can learn much from us. I have seen case after case here, operated upon or burdened with a pessary. I have seen numberless cervices cut off, and uteri injected, where it seemed to me, the primary thing to do was to rest the nerve pain, to ease the cry of an overtaxed system that was wearing itself out, and to build the system up after the plan of Weir Mitchell and Goodell, before attempting any local interference whatever. This treatment may not be as showy, but it is more effective and infinitely more logical. I cannot reconcile myself to such wholesale slaughter of cervices, or to such constant local interference without any regard whatever to the more pronounced bodily necessities, and I wish with all my heart, that Goodell's lecture "The Nerve Counterfeits of Uterine Diseases" (*Medical News*, December 6, 1884) could be read by every specialist here. It stands out as a novel of elegant English, and of deep insight into the real cause of half of the suffering met with. This field is as wide, yes wider than that of operative surgery, for it covers a larger number of cases, and it is just here that the Americans are peculiarly strong. Emmet's last edition is very highly spoken of and rightly so, for it is unique in its honesty and thoroughness. Nothing can exceed the kindness of Prof. Gusserow and of his assistants towards medical men from abroad, and his clinic is a most popular one. To him, and to Dr. Wyder, his first assistant, as well as to Drs. Laudan, and Martin I am under the greatest obligations. Prof. Schroeder was also most courteous in inviting me to his operations, and I am very appreciative of his kindness.

THE first prize, a gold medal, for excellence, in its department, has been awarded "Mellin's Food" for infants and invalids, at the great New Orleans exhibition. This verdict will be indorsed by the many physicians and mothers who have tested the merits of this preparation.

A CRITICISM OF DR. LEEDS' PAPER ON THE COMPOSITION AND METHODS OF ANALYSIS OF HUMAN MILK.

A paper read before the College of Physicians of Philadelphia, May 6, 1885.

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Denial and reiteration prove nothing. I shall, therefore, endeavor to restrain myself from the use of either of them in my effort to compass my present purpose, which is to persuade the profession of the truth of what I advanced in regard to the composition of human milk, in a paper read before the Philadelphia County Medical Society about a year ago.⁽¹⁾ I brought forward then certain arguments which seemed to me to prove conclusively that human milk contains only about one per cent. of casein. Those arguments it is not necessary for me to repeat, especially as I have nothing new to advance, and I must therefore refer any one to whom the subject is new, but who feels an interest in it, to my former paper. At present I wish merely to criticize the results arrived at by Dr. Leeds and detailed in a paper read before the College.⁽²⁾

In such a criticism, of course, I shall not be restrained by a false delicacy from using all legitimate means to show why we should decline to accept Dr. Leeds' conclusions. The question in dispute is, how much casein human milk contains, and particularly what is its quantity relatively with that contained in cows' milk. Upon the decision of this question must depend the lives of a very large number of infants, for the conclusion at which we arrive as to the relative composition of the two kinds of milk must necessarily decide how we will use cows' milk as a food for young infants.

Dr. Leeds, in his paper, proceeds first to criticize previous methods of analysis, and then goes on to describe the method used in obtaining his own results. I shall, therefore, begin by taking up his strictures upon my method of analysis, and will then discuss his own conclusions. In order that his criticism of the method I suggested may be understood, I shall have to give a brief description of my process as originally described. This was first published in the *Philadelphia Medical Times*, July 1, 1882, the paper having been read at the Philadelphia County Medical Society, the previous February.

To carry out the method, 15 c.c. of milk are required. Discharge 5 c.c. of milk from a pipette into a platinum dish and weigh; dry over a water bath at 100° C. until the weight becomes constant, then incinerate, beginning with moderate heat and finally using the blast flame. This

1. Proceedings of the Philadelphia County Medical Society, vol. vi., 1883-4.

2. Transactions of the College of Physicians of Philadelphia, 3d series, vol. vii., 1884.

gives the water, total solids and ash. Discharge 10 c.c. of milk in another dish and weigh, taking care that the weight be exactly double the first amount: pour this into a high, narrow, 100 c.c. graduated bottle and add 20 c.c. of distilled water, this being used to wash all the milk from the dish. To this add 20 c.c. of ether and tightly stopper the bottle and agitate for five minutes, then add 20 c.c. of alcohol and again agitate for five minutes and let the bottle stand until the fluid separates into two layers. Draw off the upper layer of ether containing fat, as nearly as can be done without taking any of the lower layer; add 5 c.c. of ether to mix with what fat is left, and draw off. Thus 5 c.c. of ether must be poured on and drawn off five times. The ethereal solution being dried over warm and finally boiling water, gives the amount of fat. There is now left in the bottle sugar, casein and salts; this must be washed into a dish (best platinum) and dried over the water bath. The residue is treated with boiling water and then allowed to stand; the casein sinks to the bottom and the sugar remains in solution. The clear solution is poured off and the residue is again dried and treated with boiling water, and what is thus obtained added to that already had. This must be repeated until it is found that when boiling water is poured upon the dried sugar complete solution takes place, no flocculi being seen in it. The casein residue is then, after being thoroughly dried, treated once or twice with boiling water to wash out any sugar that may have been left in it, care being taken that no casein is poured off. The sugar is added to that previously obtained, and the two residues are dried and incinerated, the loss in burning giving the weights of the casein and sugar respectively.

In Dr. Leeds' criticism of my paper he finds fault, first, with the use of a pipette in measuring out the portions of milk to be used in analysis, saying that "the milk leaves minute particles upon its walls, and the alteration in composition thus produced is greater, the more extensive the wetted surface of the measuring vessel." This objection, though theoretically correct, is trivial, and the possible error introduced is not nearly so great as that likely to result from his own method of pouring out at a guess 5 c.c., of fluid and thus having to weigh several times before getting sufficiently near the desired quantity to be able to proceed with the analysis. This is particularly the case where the 10 c.c. for the second portion of the analysis comes to be weighed, for it must weigh exactly twice that first used to make the analysis at all accurate. He says, in speaking of the first portion of my method, by which are obtained the water, total solids and ash—"evaporation to dryness in a water bath to constant weight, is tedious, usually requiring three hours, and is neither so accurate nor so expeditious as the method of coagulation with alcohol," and then after giving a comparison of the results obtained by trial of the two methods, says—"in other words, at the expiration of seven hours, I had obtained the same constant weight as I had found by the method of

coagulation at the end of one and one-half hours." Now he comes to this erroneous conclusion because he makes a mistake in his arithmetic with regard to the results obtained by his experimental trial. The actual fact is, that the addition of alcohol is an improvement in that portion of the analysis, although it expedites the last portion of the drying only very slightly, and does not prevent the formation of a skin upon the surface, as Dr. Leeds states. His mistake is as follows: he says, "to 5.1195 grms. milk added 3 c.c. alcohol, evaporated to dryness on water-bath * * and then to constant weight in air-bath at 105°. Loss of weight 0.699 grm. or 13.56 per cent." This last sentence contains two mistakes, it should have been—total solids 0.699 grm. or 13.65 per cent. This mistake in the percentage of the solids is evidently not a mere typographical error, for upon it is based his conclusion that the addition of alcohol so very much expedites the drying. He then proceeds to take a second sample and dry it without the addition of alcohol; he drives off moisture until the total solids left amounted at the end of seven hours to 13.56 per cent. If he had dried the first sample with which he tested his own method, to the same degree as he did the latter, he would have found that it took very little less time, for it is in driving off the last portion of moisture that the process is tedious. The sample dried by his own method was not, then, as the figures when corrected show, brought to constant weight, but still contained some moisture, and thus his mistaken conclusion that the addition of alcohol so much expedites the process.

With regard to the extraction of fat, Dr. Leeds says: "When water is present ether will extract not only fat, but substances soluble in water. This was probably the case in the present instance, and experiment confirmed the conjecture. After distilling off the impure ether, drying the fat to constant weight at 105° and weighing, the fat thus obtained was redissolved in absolute ether. In every trial a residue was left behind. This residue dissolved readily in water. It proved to be milk sugar." I have often tried redissolving the fat residues in absolute ether, and never had any difficulty in causing it all to pass into solution, except in the instances mentioned in my previous paper, when a white substance was precipitated from the ethereal solutions of fat from human milk. This substance when separated could not be redissolved in ether, as I mentioned, and for the moment I thought it must be casein or sugar, but when I found that it melted and looked like any other hot grease the moment it was warmed, I concluded it must be some form of fat for whose reactions and appearance I could not account, nor can I now. The reason Dr. Leeds found milk sugar with the fat when extracted by my method must have been that he was careless in pipetting off the ethereal solution of fat, and drew off some of the water containing milk sugar, an accident which can only be avoided by observing the greatest care in that portion of the process.

There is little that need be said with regard to the objections brought forward to my method of separating casein and sugar. Dr. Leeds says casein (albuminoids) is "partly soluble in boiling water." If this is true my whole method must fall to the ground, but in my paper I stated my conviction that if casein be once thoroughly hard dried, it entirely ceases to be soluble in water, and this is very easily tested by drying some casein and trying to redissolve it.

It now becomes necessary to speak of the method of analysis advocated by Dr. Leeds, and of his detail of the work he has done. The method he follows is the Geber-Ritthausen's, and he says of it, "that it is the present time which is precisely and rigidly accurate."

The method is described in full in a book entitled *Chemical and Physical Analysis of Milk, Condensed Milk, Infants' Food, etc.*, by Dr. Nicholas Gerber, translated by Dr. Hermann Endemann, New York, 1882. The method, as described by Dr. Leeds, is as follows:

"Total Solids.—Weight off 5 grms. of milk in a tared covered platinum capsule. Coagulate with absolute alcohol (about 3 c.c. are used), and evaporate to dryness on water-bath. Transfer to drying oven and keep at 105° C. until constant weight is attained.

"Ash.—Ignite the residue first over a small flame, and finally at a dull red heat. Cover the dish, cool in the desiccator, and weigh.

"Albuminoids.—Dissolve 63.5 grms. pure sulphate of copper in a litre of water. Prepare also a potash solution containing 50 grms. caustic potash in 1 litre. Weigh out 10 grms. of milk in a covered beaker glass and dilute with 100 c.c. water. Add 2.5 potash to 3 c.c. of the copper solution. Then run in sufficient potash to neutralize exactly the excess of sulphate, which will require about 1.25 to 1.5 c.c. of the potash. The coagulated albuminoids settle immediately, leaving the liquid clear. In testing the reaction, the stirring-rod, which has been washed and withdrawn from the solution as soon as the potash has been stirred in, is dipped into the clear supernatant liquid. A drop of this liquid should turn neutral test paper neither blue nor red. Care should be exercised not to allow the stirring-rod to bring up particles of the coagulum, since these interfere with the reaction. The clear liquid is then decanted through a filter paper, previously dried at 110° , and weighed in a weighing-flask. The precipitate is then stirred up with 100 c.c. water, allowed to settle, the supernatant liquid again decanted through the filter, and, finally, the precipitate is washed upon it. The beaker is thoroughly cleansed with a rubber washer; and all these filtrates, amounting to about 240 c.c., are finally made up to exactly 250 c.c. for the determination of milk sugar.

"The filter-paper containing the precipitate is then opened out upon a large watch-glass, and, after drying to a certain point, is divided up into small particles by a platinum spatula, and this comminution is repeated from time to time, until finally the whole mass becomes a fine powder.

"Fat.—The filter-paper containing the precipitate is gathered up and placed loosely in a proper funnel. The beaker-glass used for the precipitation is washed out with ether to dissolve any traces of fat adhering to it, and these ethereal washings are poured through the funnel and allowed to run into a small weighed flask, with which the funnel is connected by a ground-glass joint. The funnel is then connected with a return-cooler, the flask carefully heated by a water-bath, and the filter-paper is made to swim in the ether condensed in the funnel for about an hour, when the extraction of fat will be complete. The ether is distilled off, the flask dried at a temperature of 105° , cooled in a desiccator, and weighed. Its increment in weight gives the amount of fat.

"Albuminoids.—The residue in the filter is dried at 110° , and weighed in the weighing flask until constant weight is attained. It is then ignited in a platinum crucible, and the weight of ash deducted. The loss of weight is the amount of albuminoids.

"Milk Sugar.—This is determined in the filtrate by Fehling's solution. The figures thus obtained are identical with those found by evaporation of the filtrate to dryness, igniting, and subtracting ash."

The first and most important objection to this process is that there are added to the milk to be analyzed fixed substances, which are believed to form new compounds with some of its constituents. Thus, Dr. Leeds tells us, that an albuminate of copper is formed and precipitated. In his criticism of Haidlen's method he adds a foot-note, saying: "The addition of gypsum, marble, glass, sand, etc., is unnecessary, and a source of error." Why is not the addition of potash and sulphate of copper a much greater source of error? The first mentioned substances are comparatively inert, while the latter are among the most active in the strength of their chemical affinities. No method of analysis can be accepted as conclusively accurate which depends upon the introduction of a reagent which forms a new compound which is insusceptible of being again separated into its original parts, to show how much of each is present when the analysis is completed. How is it possible to know that the incineration of any given weight of albuminate of copper, formed from human milk, which has been dried at 100° or 105° , will inform us how much casein was originally needed to make up the compound, when it is remembered that casein itself is a substance about which we still know so little that it is not yet positively certain whether it is simple or compound?

Dr. Leeds' reagents for precipitating the albuminoids are almost exactly those who use to make the Fehling's copper-test. Why, therefore, is it not likely that some of the sugar is precipitated or altered by them, as would surely happen if the fluid was heated, thereby preventing its reacting to the Fehling's solution, with which, as I understand it, Dr. Leeds made his test of the purity of his supposed casein residue. Dr.

Leeds himself suggests another objection, "that, in the precipitation of the albuminoids by Ritthausen's solution, hydrated basic sulphate of copper is precipitated." But, he says, this objection does not hold good, as he has "failed to detect in it the presence of more than traces of hydrated basic sulphate." For my own part, I made the experiment of mixing the reagents, as directed, in water simply, without the presence of milk. So soon as the copper and potash solutions were brought together, a precipitation of course took place. This precipitate I collected and dried at 100° , and then exposed to the heat of a gas flame. The difference between the weight of the precipitate dried in a water bath at 100° , until it ceased to lose weight, and after it had been exposed to the heat of a flame, was (the same bulks of the reagents being used as directed for analysis) 0.038 gramme. This makes, if the same thing occurs when the method is used for analytic purposes, the casein too great in quantity by about 0.35 per cent., which is nearly the difference between Dr. Leeds's conclusion and my own as to the quantity of casein in human milk. Although the conditions are different, when the reagents alone are used, from those where they are used in analysis, and it cannot be argued that there must necessarily be a too high rating of the casein from this cause, yet, on the other hand, it can be by no means proved that such an error does not result; and, of the two possibilities, the latter seems much the more probable. This matter alone, even if there was no other objection to the process advocated by Dr. Leeds, is sufficient reason for declaring the method absolutely unreliable in the present state of knowledge of the subject.

I made experimental trials of the Gerber-Ritthausen's method, which Dr. Leeds declares to be the only accurate one known. The details of these trials it is hardly necessary to describe here; the result was, that the Gerber-Ritthausen's method rated the fat and milk-sugar a trifle lower, and the casein higher, than my own method did when applied to the same milk. The ash and water came out of the same by both processes. With regard to the ash I found that it made no difference whether the incineration was done with an ordinary flame or with the blast, or whether in a closed or open vessel. If the burning was thoroughly done with the ordinary flame, the application afterwards of the blast did not drive off anything more; nor was there any difference in the weight of the residue, whether the vessel was open or covered. With regard to the fact that Dr. Leeds' process gave a slightly less amount of fat than did my own, although the difference was so slight as to be hardly worth mentioning, it struck me that, perhaps, the potash which is used may react to a slight degree upon some of the fat, and carry it down in some new form with the casein, which is acted upon by the copper. This is only a further reason for declining to accept conclusions deduced from a process which is open to so many sources of error, no one of which can be really proved to be inoperative.

The next matter I have to take up in connection with the work Dr. Leeds has done in milk analysis, is one which I approach with a good deal of hesitation, nor would I mention it at all in a spirit of faultfinding, criticism, but only because it is necessary to have an exact appreciation of the correctness of his work, in order that a just estimate of its value may be attained. The table which he gives and which embodies the results of his analyses of eighty samples of human milk, has in it more errors than should exist when deductions are drawn intended to convince scientific men of the correctness of an estimate of the composition of human milk which, to the present time certainly, has not received anything like universal, or even general acceptance. I have carefully gone over this table and find that in seven out of his sixty-four separate analyses, the figures in the column headed "total solids by addition of constituents" are incorrect. The errors are all small except in analysis No. 32, but in it the error is quite a large one. The errors occur in Nos. 24, 32, 46, 50, 54, 56 59, and 75-80, (marked, "anæmic six cases"). Dr. Leeds gives at the end of his table in parallel columns the maximum, minimum, and average of each of the different constituents. In the average column the figures given are all incorrect. It is not easy to say exactly how these averages were arrived at, for Dr. Leeds (page 243 loc. cit.) says that in estimating the "maximum difference" he omitted "Laboratory No. 1063" as being affected by some accidental error, and used sixty-two separate analyses, which are marked respectively, "robust six cases" and "anæmic six cases." My table shows in parallel columns Dr. Leeds's estimate of the average and corrected figures deduced in different ways.

	Leeds's Average	Average obtained by including all the analyses. Estimating Nos 36-59 and 60-83 as 4 each, and the last two (Nos. 66-80) as 12. Dividing all the sums, except ash and total solids directly by evaporation, by 76 and those by 80.	Analysis No 1063 omitted, otherwise same as previous estimate, but the sums divided by 75 and 79 respectively.	Analysis No. 1063 and the last two omitted, consequently the sums divided by 57 and 61.
I. Specific gravity.....	1.0313			...
II. Albuminoids.....	1.995	1.949	1.910	2.139
III. Sugar.....	6.936	6.954	6.975	7.738
IV. Fat.....	4.131	4.127	4.137	4.637
V. Solids not fat.....	9.137			
VI. Ash.....	0.201	0.218	0.219	0.237
VII. Total solids (by addition of constituents).....	13.268	13.253	13.245	14.750
VIII. Total solids (directly by evaporation).....	13.267	13.237	13.235	14.637
IX. Difference between VII and VIII.....	0.001	0.016	0.010	0.113
X. Water.....	86.732			

Dr. Leeds says: "thus, it will be seen, from the accompanying table, giving the results of sixty-two separate analyses of human milk (excluding Laboratory No. 1063, as being manifestly affected by some accidental error), the maximum difference is 0.21 per cent.

"The average error, as determined by ordinary arithmetical methods, is 0.001 per cent."

A glance at the table shows how far from the actual facts this statement is; for if the first sixty-two analyses only are considered, and No. 1063 omitted, the error, instead of being 0.001 per cent., is 0.113 per cent., or just one hundred and thirteen times greater than is stated. The errors are all, it is but just to state, small, still the existence of so very many of them must necessarily cast much doubt upon the value of the whole work, especially when it is considered how very easily many of them could have been avoided, as, for instance, in the matter of making up the column "total solids, by addition of constituents," when the sum in addition is so very simple a one.

I may sum up by saying that Dr. Leed's conclusions must not be accepted, for the following reasons:

First, because he has failed to disprove any of the propositions I put forth in my previous paper, have brought no proof to substantiating his assertion, and the Gerber-Ritthausen's is "the only method known at the present time which is precise and rigidly accurate."

Second, that the reasons given for estimating the casein amount low (about 1 per cent.), still hold, in the absence of disproof.

Third, that the process advocated by Dr. Leeds is necessarily unreliable, because there are added extraneous fixed substances which form new compounds with the milk, rendering it impossible to make accurate determinations of the various constituents.

Fourth, because of the numerous and considerable inaccuracies which I have pointed out in the paper.

After the reading of the preceding paper

Dr. Albert R. Leeds said: I shall refer briefly to some of the objections made by Dr. Meigs. The plan taken by Dr. Meigs of criticising the minutiae of the work is an entirely just one, inasmuch as we propose to arrive at results of as great scientific accuracy as possible.

In regard to the first point that he speaks of. It is a little point, to be sure, but he is certainly not correct in stating that it makes no difference whether we draw off milk for analysis with a pipette or pour directly into the dish. Milk is not a homogeneous liquid in the sense that it does not contain minute particles which have the power of attaching themselves to the walls of the vessels, and the constitution of the milk after it has left the pipette is somewhat altered by the leaving behind on the walls of the pipette of some of these minute particles.

2d. In regard to the propriety of measuring a portion as compared with weighing a portion. There can be no doubt in the mind of any chemist as to which is the more correct. The only method which can lay claim to accuracy is that by direct weighing. He speaks as though it were a matter of difficulty to obtain an accurate weight. Such is not the case. When supplied with a beaker, which has its own tare or weight marked on the glass, a little experience enables one to estimate how much is to be poured in to make a definite weight of milk. The beaker is kept covered during weighing to prevent evaporation. When a measured quantity is employed, we cannot arrive at definite results until the specific gravity is ascertained. This method is so unsatisfactory that no chemist thinks of making a determination of milk analysis upon a measured quantity, but always upon a weighed sample. If, in a legal case relating to the adulteration of milk, it were discovered that the chemist had used measures instead of weight, I think that his testimony would be thrown out at once.

3d. As to the amount of time consumed in evaporation. A great many experiments have been made upon the relative thoroughness of drying by means of alcohol and drying without alcohol. The results are identical, provided one does evaporate to a constant weight. As a curious matter bearing on this point, I may say that my results upon the determination of total solids were checked off by other chemists on the State Board of Health, who used other methods of drying. This seems to be a small matter, but inasmuch as the State law requires that in the State of New Jersey, cow's milk shall contain above 12 per cent. of total solids, the method of drying becomes of importance. It was found that the results were practically identical, the only difference being that by the addition of alcohol a great deal of economy of time was attained.

4th. In regard to the use of ether as a solvent for the fat in the manner proposed by Dr. Meigs. I fail to see that there can be any justification whatever for its use in this way. Whenever it is necessary to extract fat from an organic body, the universal rule is, that even in a food substance like flour or meal, which contain very little moisture, previous drying of the organic substance should be resorted to before extraction of the fat with ether, because chemists regard the presence of so minute an amount of water as is found in food substances, as sufficient to hydrate the ether sufficiently to carry into solution other matters. This is as thoroughly verified as any point in chemistry. I look with perfect astonishment on a method of fat extraction which proposes to add 10 c.c. of ether to milk containing already as much as 37 per cent. of water to begin with, and then add two or three volumes of water in addition. You get very little ether and an enormous amount of water, and as a result other materials are necessarily extracted. It is not for me to go into what other analyses have been performed. I only speak of the analyses which I performed

myself, and I found that the water had extracted other substances, and I should have thought it very remarkable if it had not done so.

5th. As regards the addition of foreign substances. In the early days of chemistry, at the very beginning of analytical work, it was considered that the bodies themselves should be actually separated by means of crystallization, different solubilities, and so on. These methods are now largely given up as lacking in accuracy. On the contrary, the great point in an analytical determination now is to obtain some compound of the body which we desire to isolate, this compound being one of very definite composition, and capable of complete separation from the other substances with which it is associated. The objection has been made to the addition of substances like copper, and to the addition of substances like sand, glass, gypsum, and so on. The objection to the addition of these latter substances rests on an entirely different ground from that which applies to the addition of copper. When you add any of these latter substances no chemical union takes place, and the residue which is left behind after evaporation is highly hygroscopic. As direct evaporation gives all that is desired, they should not be used.

The addition of copper is resorted to for an entirely different object. It is added because it forms a most insoluble compound with the albuminoids and a compound which is capable of being manipulated, filtered, and washed with thoroughness. You may form an albuminate of zinc, of iron, or of other substances, but none of them, as has been shown by Ritthausen, who has made a more extensive study of the albuminoids than any other observer, possesses the facility for manipulating and for thorough washing as the albuminate of copper.

The action of potash on the casein could only happen in crude manipulations. In the manipulations of these albuminoids one obtains in the first place, in an acid solution, a precipitate of albuminate of copper; he then adds potash, not to such a point as to act on the albuminate, but to such a point as will just take up the sulphuric acid removed from the copper. It is added to the point of exact neutrality and in the presence of a strong mineral acid like sulphuric. I think that there is not the slightest danger of the potash dissolving the casein. Unquestionably it would do so if added to excess.

Then as to the albuminate of copper itself, the experiment detailed was of an entirely different description. On the addition of caustic soda to the copper solution, a precipitate of hydrate of copper would be obtained, which by boiling alone would give up its water and be converted into the oxide of copper. The experiment is not at all analogous to the changes occurring in the manipulation of albuminate of copper. When the albuminate of copper is obtained, it is washed thoroughly, dried, and then ignited, thus finding the exact weight of the mineral portion. This subtracted from the previous weight gives the weight of the organic constitu-

ents. I do not see that anything is lacking to make this mode of determining the albuminoids an accurate method. The presence of the basic sulphate of copper in the precipitated albuminate I have been unable to verify with certainty. The reduction of the copper in Fehling's test is a matter of an entirely different description. That is dependent upon the formation of a suboxide of copper. There is no trace of reduced copper when albuminate of copper is precipitated as proposed in the analysis of milk, and hence there can be no reduction of any substances of the nature of milk sugar.

In regard to the small errors in addition, that is a matter of entire news to me. I am much surprised to learn that such is the case, but as to the conclusions being shaken, that I cannot suppose there is the slightest ground for believing on the strength of the evidence afforded to-night. The accumulation of testimony has been wholly adverse to the conclusions obtained by Dr. Meigs. They are unsupported by any other chemists who have worked on this subject. So far as I know, he is the only one who has advocated his view as to the small percentage of casein which he supposes to be present in woman's milk.

Dr. Meigs: I merely wish to reply to one thing. The remarks of Dr. Leeds would seem to show that I had taken a measured instead of a weighed quantity. I always weigh the quantity. I use the measure simply to get at the neighborhood of the weight. I use the pipette just as Dr. Leeds uses the beaker glass.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Thirty-sixth Annual Meeting, New Orleans, 1885.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

TUESDAY, APRIL 28TH.—FIRST DAY.

[CONCLUDED FROM PAGE 269.]

II. Laparotomy as Compared with other Operations.—The value of the operation of laparotomy was compared in detail, with Schroeder's vaginal operation in cases in which the circumuterine abscess does not point downward, and, in fact, does not point anywhere. After a careful discussion of the advantages and disadvantages of both methods, the author of the paper was very decidedly of the opinion, advanced by Lawson Tait, that in circumuterine abscesses, which can only be reached from vagina or suprapubic region, laparotomy is the operation of election.

III. Points in Diagnosis.—Bandl is hardly correct when he states (*Die Krankheiten der Tuben und die extrauterin Schwangerschaft*) that the diagnosis of suppuration and formation of abscess in the pelvis is generally not difficult because they are indicated by increase of evening fever, rigors, and nightsweats. The author has twice observed cases in which, without fever, rigors, or nightsweats, more than one pint of pus was present. Exploratory puncture through the vagina, by means of a fine aspirator needle, while not entirely harmless as insisted on by Dr. Emmet, gives reliable information, and is comparatively safe.

Exploratory laparotomy is preferable to suprapubic exploratory puncture. The escape of one drop of pus into the peritoneal cavity may be sufficient to start up a general acute peritonitis. Especially is this means of diagnosis advisable when a suprapubic tumor is recognizable.

In the author's three cases the abscess had ruptured into the rectum, and the diagnosis was simple.

It is dangerous to wait too long in cases of suspected periuterine abscess on account of the danger of amyloid nephritis. In conclusion, the author paid a compliment to Lawson Tait, the first advocate of free laparotomy in cases of this kind.

Dr. Engelmann, of St. Louis, thought that Dr. Emmet very correctly laid stress upon the fact that inflammations of the pelvic connective tissue were not confined to the puerperal state. As regards operative procedure, laparotomy ought to be the *last* resort, but not a *late* one. It is frequently impossible to make a diagnosis before the exploratory incision is made. He had lost one case from septicæmia in his earlier practice as the result of the imperfect *technique* of the operation.

Dr. Gordon, of Portland, Me., thought that in from one-half to two-thirds of all cases of pelvic cellulitis the physician is responsible for the production of the condition. The introduction of the uterine sound, application of iodine, nitrate of silver, and carbolic acid to the endometrium were apt to injure the genital structures if not carefully performed. Prophylaxis was more important than cure.

Dr. Reed, of Ohio, thought Dr. Gordon's statement entirely too sweeping. He narrated the histories of three cases occurring in his own practice; two died; one made an incomplete recovery.

Dr. Quimby, of New Jersey, had one case in which the diagnosis was obscure. Dr. Gurdon Buck's operation—incision from anterior superior spinal process of ilium to Poupart's ligament, introduction of finger under the ligament, introduction of pledget of lint—was performed, and the patient recovered.

Dr. Carroll, of Texas, desired to enter a protest against Dr. Gordon's etiology of pelvic abscess; it may be so in Maine, it is not the case in Texas.

Dr. W. W. Jaggard, of Chicago, referred to *Dr. Byford's* criticism of *Dr. Fenger's* operation. When an abscess discharges through the rectum it is usually possible to dilate this orifice so as to secure free drainage. The communication between abscess and bowel could be dilated with the finger or cut. *Schroeder* has operated successfully in cases of chronic periuterine abscess, after perforation of the bladder, by the high section.

Dr. Sutton, of Pittsburg, closed the discussion. He had recently performed laparotomy for pelvic abscess, and the patient recovered. In cases in which the walls of the cavity cannot be united to the anterior wall of the abdomen, it is advisable, after evacuation and scraping of interior, to fill with iodoform and close. As regards the diagnosis, if no dull space exists above the symphysis always try aspirator needle.

Dr. G. F. French, of Minneapolis, read a paper entitled
HOW SOON AFTER EXPOSURE TO SEPSIS MAY THE ACCOUCHEUR RESUME PRACTICE?

The term puerperal fever embraces a group of essentially diverse affections, some of which are non-contagious; but the septicæmic variety of the disease is that which alone engages us in this discussion, and he expressed the belief that the evidence that this fever is caused by the contagia of erysipelas, scarlet fever, and septic dirt, is as demonstrable as any proposition of Euclid. In order to obtain all possible light on the duty of the practitioner to the obstetric patient, he addressed in October last, letters of inquiry to some of the most distinguished medical men in this country and in Europe, of which the following is the substance:

"How soon after exposure to sepsis, may the accoucheur safely resume practice? My purpose is to controvert the opinion which obtains in the profession, that time is an essential element in the cleansing process. I have had an experience which emboldens me to make abdominal section on the day following exposure. I greatly desire to know whether your own experience warrants me in pursuing such a course."

In reply, *Thornton*, *Savage*, and *Hegar* write that they believe time is essential—to be accompanied, of course, with careful cleansing. While *Emmet*, *Batley*, *Marcy*, *Goodell*, and *Thomas* in our own country, with *Martin*, *Schroeder*, *Nussbaum*, *Volkman*, and *Esmarch* in Europe, write that they believe time to be entirely non-essential and that thorough disinfection can be at once accomplished. The present weight of evidence goes to show that the materies morbi of contagion is a non-gaseous particle, capable of being acted upon and demonstrably susceptible of destruction. Some kinds of contagia have been isolated and their property of self-multiplication demonstrated. It has been exactly determined how such contagia are affected by different agents. The presence of other contagia is inferred from analogous diseased conditions and by disinfecting the supposed source of this latter contagion the morbid ef-

fects have been interrupted. Experiments show that the resting spores of the bacilli, the most difficult to destroy of all forms of life, can be killed by a corrosive sublimate solution 1:5000.

Fermentation and putrefaction occur only when the specific germ lives—and filth undergoing fermentative change is most conducive to the spread of infectious diseases. Particles of contagia most frequently find lodgement on our hands and particularly under the finger-nails. It is always possible after the ordinary use of a nail-brush or knife, to remove particles, of dirt in which the microscope reveals living germs of possible infection. On this account he cuts his nails short and swabs under them with a blunt instrument covered with cloth and wet with some disinfecting liquid. He formerly used for this purpose 5 per cent. carbolic acid, but this made the flesh crack—so he now uses instead corrosive sublimate solution 1:2000. For hang-nails, cracks, and abrasions he uses colodion.

All instruments are kept scrupulously clean as well as disinfected, and the nurse is regarded as one of the instruments. The June number of the *Centralblatt für Chirurgie*, of 1880, contains a most impressive contribution to this subject by Volkmann. In his letter to me, dated Halle, Dec. 5, 1884, he says: "I hold the same views to-day as at that time. A surgeon who disinfects himself well, can, immediately after making a post-mortem, undertake any operation known to surgery. Every morning from six to eight during the summer I am obliged to give the students operations on the cadaver; and from ten to three I am busy in the hospital, operating and dressing wounds. I have never yet infected a patient. In the winter I have no operations on the cadaver. Comparing my results in the clinic, I can assure you that the mortality in summer is not greater than in winter.

To show his confidence in the possibility of absolute disinfection, he made the following experiments:

June 21, 1884, after laying open a dissecting abscess of the thigh in a pyæmic patient, and stripping the limb with both hands till they were offensively drenched with the pus, he carefully disinfected himself, and three hours later attended Mrs. M. in confinement.

July 22, in dealing with a case of pyonephrosis, before penetrating the kidney he came upon a foul perinephritic abscess. Passing through this the kidney was incised, explored, and its grumous contents scooped out with the finger. The hand was so long engaged in this work, that a more complete purulent saturation could hardly be conceived. In the afternoon of the same day he confined the wife of a physician, having stated to him the full extent of his morning exposure. In both cases the convalescence was perfectly normal.

Feb. 11, 1885, he purposely infected his index finger with the ichor of an erysipelatous case and after a corrosive sublimate washing, inserted it

in a fresh wound from which he had just excised a tumor. He might multiply instances of this kind. The following characteristic letter, received from Prof. Esmarch, epitomizes the subject under discussion:

"If you have thoroughly disinfected yourself, you can immediately enter upon obstetric practice. Time does not destroy septic dirt."

Dr. S. Paine, of Texas, reported

AN INTERESTING CASE OF SUBSEROUS FIBROID TUMOR OF THE UTERUS.

The patient, white, forty-three years old, native of Louisiana, began to have pains in the abdomen and pelvis about two years ago; menorrhagia and leucorrhœa. A tumor was demonstrable, which grew so rapidly that all the abdominal viscera were encroached upon, and respiration was interfered with. The diagnosis of subserous fibroid tumor of the uterus was made. Squibb's aqueous extract of ergot, rubbed up in glycerine and water, was exhibited in large quantities, through one year, hypodermatically, with the effect of causing almost entire disappearance of the swelling. As much as ten grains, three times daily, were exhibited. No tendency to spasms, gangrene, or other expression of ergotism, was observed. The cardiac rhythm was slowed.

Dr. Nelson, of Chicago, thought that *Dr. Paine's* case could be multiplied. Before the formation of omental adhesions ergot will, in many cases, control the growth of the tumor. The great mistake in the exhibition of ergot is that it is generally given in two small doses through too short a period of time.

WEDNESDAY, APRIL 29TH—SECOND DAY.

Dr. R. J. Nunn, of Savannah, Ga., read a paper on
THE MULTIPLE SPECULUM UTERI, AND AN IMPROVED DRESSING FORCEPS.

The speculum is of the antero-posterior bivalve variety, like Cusco's; it has the extension motion of Grave's, and like it, can be reversed for a Sims's. The upper blade consists of two superposed leaves capable of lateral motion. Two lock-nuts fix this blade immovable in any position when such fixation is desirable, as when using the instrument as a Sims'. The arrangement of parts adopted gives great powers of expansion and self-retention.

The dressing forceps has a downward and backward curve in the direction in which the jaws open. It has a spring catch, forming a useful polypus forceps, etc., and between the pivot and the jaws the shank of the forceps is formed into a scissors.

Dr. S. M. Healey, of Cumberland, Md., then described

A NEW SPECULUM AND A NEW VAGINAL IRRIGATOR.

The speculum is a self-retaining Sims's speculum; it is secured *in situ* by a sacral pad, with bands of steel, connected together by ball-and-sock-

et joint. The instrument was applied to a patient in the presence of the members of the Section.

The vaginal irrigator is a long, conical, corrugated glass tube, with a rubber diaphragm, containing two perforations for the insertion of a delivery and an escape tube.

Dr. Geo. J. Engelmann, of St. Louis, read a paper on

THE IMPROVED TECHNIQUE IN GYNECOLOGICAL OPERATIONS, MINOR AND MAJOR.

He called attention to the various models of Simon's specula, as more efficient instruments for operation in the lithotomy position than the instrument of Sims. He employs continuous irrigation with hot water, 115° - 125° F., during all his operations. He uses semicircular needles and strong silk thread, which has been disinfected. The operative *technique*, thus briefly sketched, has received no mention in any American text-book. Dr. Engelmann claims the following advantages for this method:

1. Cleanliness, or asepsis.
2. Field of operation is clear.
3. Rapidity of operation.
4. Hot water acts as an efficient hæmostatic.

The irrigation with hot water is an idea of his own, and he has used it, for seven or eight years. The method of operating, with the exception of the hot water, is that extensively practiced in Europe.

Dr. Henry O. Marcy, of Boston, read a paper on

THE "ROLE" OF BACTERIA IN PARTURITION,

the underlying thought of which was that normal labor is a physiological process and as such aseptic, hence antiseptic injections are unnecessary, and, beyond the securing of cleanliness, meddlesome and dangerous. When the labor departs from the normal character, then new factors are introduced. In instrumental labors, and where the hand is introduced into the cavity of the uterus, exposures are of necessity not unlike those incidental to any surgical operative procedure. The uterus in most labors is subject to lesions where infection may easily be superinduced and when thus infected, Dr. Marcy showed that the puerperal state made most favorable conditions for rapid development of microorganisms, a favorable soil for growing most dangerous seed. He laid the utmost emphasis upon the use of all antiseptic precautions, and urged precisely the same thoughtful attention to all details as in a major surgical operation.

Dr. Healey, of Maryland, held that sepsis occurs in every labor, and milk fever was evidence of the fact.

Dr. Gordon, of Maine, said that he did not believe in antisepsis, but he did believe in cleanliness. Lister had recently lost two cases from septicæmia. Cases of poisoning from carbolic acid and the bichloride of

mercury had been recently reported. He was known as the hot-water surgeon, on account of the frequent employment of large quantities of that agent. He had no objections to hot vaginal injections after parturition, on general principles; he did not object to medicated solutions.

Dr. Alex. J. Stone, of Minnesota, thought that *Dr. Marcy* misrepresented *Dr. Thomas* in the statement with reference to the sites of purulent resorption. The placental area, the cervix, and the vulvo-vaginal canal were the regions through which the resorption of pus usually occurs. Extensive lacerations of the cervix occur quite as frequently among multiparæ as in primiparæ.

Dr. Hunter, of Minnesota, closed the discussion by saying that it was too late, at the present day, to appeal to the *vis medicatrix natureæ*. The experiments in the cultivation of germs, and the clinical observations in Vienna, Prague, Berlin and other large cities, established the prophylactic value of antiseptic injections beyond peradventure of doubt.

Dr. A. Reeves Jackson, of Chicago; read a paper entitled

VAGINAL HYSTERECTOMY FOR CANCER.

A surgical procedure, to be beneficial, should relieve suffering and prolong life. If it fails to effect either of these results, it is useless. If it destroys more lives than it saves, it is injurious, and should be abandoned.

A table based upon 256 cases of vaginal hysterectomy, compiled by *Dr. P. F. Munde*, showed a mortality of only 24.6 per cent.; while the results of the operations performed by *Martin Schroeder* and *Ohlshausen*, *all of whose cases are published*, show a much higher rate of mortality, namely, 38.6 per cent. in 201 operations. This discrepancy is explainable by the fact that such tables as that of *Dr. Munde* are based upon incomplete returns—the successful cases being published, and the unsuccessful ones suppressed. Figures will not lie if they have a fair chance. If the whole truth in relation to this matter were known, the mortality of the operation would be found much greater than it now appears. Taking even the foregoing most favorable report, vaginal hysterectomy has actually destroyed nearly one hundred years of life. If all the cases were published, the amount of destruction would appear much greater. There is nothing to offset this. It has yet to be shown that a single life, otherwise doomed by the disease, has been saved by the operation. The history of the operation does not afford ground for hope that improved methods in its performance will materially better the results. *Schroeder's* greatest success was obtained in his first eight cases, with a mortality of 8.7 per cent.

The dangerous character of the operation is not the gravest charge against it; it does not benefit those who recover. The disease recurs in all, sooner or later, and their sufferings, which have at best only been in-

interrupted, are as severe as before. In short, the patients gain nothing and die, on the average, sooner than if let alone.

Of all the methods of treatment which have been used for uterine cancer, hysterectomy has given the worst results, both immediate and remote; and the statistics seem to show that it has killed more rapidly than the disease itself.

Schroeder, Munde, and others think that vaginal hysterectomy should be restricted to cases in which the cancer is limited to the cervical mucous membrane, or to the body of the uterus. It is impossible, in the present state of our art, to make the subtle diagnostic distinctions which they imply. There are no means by which the extent of cancerous involvement can be known in any given case. The unreliability of Schroeder's method by digital touch alone, is shown clearly by the rapid and numerous recurrences of the disease which have followed his own operations.

When cancer affects the cervix uteri, extirpation is improper because unnecessary. Supravaginal amputation, with a mortality only one-fourth as great, does all that can be done by total removal.

The diagnosis of cancer of this body is always difficult, and frequently impossible in the only stage in which extirpation can be proper or useful. Here, too, the disease is of much longer duration and less painful than when it attacks the cervix, so that a highly perilous operation is not justifiable. The so-called "palliative" operations are not only less fatal in all forms and locations of the disease, but more lasting in their good results than the "radical" operations.

Conclusions :

1. Any operation for cancer which does not completely remove the disease will be followed by recurrence.

2. During life the diagnosis of the extent of cancerous disease originating in any part of the uterus is at present impossible, hence no operative procedure can afford a guarantee of complete removal.

3. In view of this necessary doubt, no operation is justifiable which greatly endangers life, provided other and safer methods of treatment are available.

4. Vaginal hysterectomy has sacrificed the lives of more than one-third of those who have been subjected to it, the mortality of the operation when done by those of greatest skill and experience being over thirty-six per cent.

5. Other methods of treatment, attended by not more than one-sixth to one-fourth the mortality of vaginal extirpation are equally efficient in ameliorating the symptoms and retarding the progress of the disease, and these have been followed by as good or better ultimate results. Hence they should be preferred.

6. Hysterectomy does not avert or lessen suffering; it destroys and does not save life. It is, therefore, not a useful but an injurious operation, and being such, it is unjustifiable, and ought to be abandoned.

THURSDAY, APRIL 30TH.—THIRD DAY.

DR. W. W. JAGGARD, of Chicago, read a paper on

THE RING OF BANDL.

Conflicting views as to the changes which occur in the cervix uteri during pregnancy and labor have been urged from the latter part of the eighteenth century up to the present day.

The object of the paper was to sketch very briefly the outlines of our knowledge upon this important subject, especially since the views of Bandl have been grossly misrepresented. The old theory, of Roederer and Stein, Sr., displaced by the doctrine of Stoltz, in 1826, is coming to the front again, as the result more particularly of the anatomical studies of Braune and the researches of Bandl. Bandl's doctrine is substantially that promulgated by Carl Braun, in 1857. Professor Sales, in 1869, 1874, and 1877, approximates the position of Braun, Braune, and Bandl.

It is inconceivable that the little, thin-walled, nipple-like process, the cervix of Müller, could be so distended as to receive the entire head of the child, as shown in Braune's drawing, and still be capable of functional activity. If this proposition is regarded as demonstrated, the greater part of the cervix, as shown in Braune's drawing, must have been filled out by the egg during pregnancy, and the cervix of Müller must play a very insignificant role. The cervix of Müller forms a part, from two-fifths to one and one-fifth inches long, from the os externum upwards, of the cervix of Braune. The cervix as shown from Braune's drawing, is the lower segment of the uterus of the older observers, plus the little tube described by Müller. After a careful review of recent evidence upon the topic, Dr. Jaggard said that it is impossible, in the present state of our knowledge, to assert dogmatically that the ring of Bandl and the anatomical internal os are identical, but that the weight of probable evidence, at present at our command, is very decidedly in favor of such a view.

DR. GUSTAV ZINKE, of Cincinnati, then read a paper on

EMMETT'S OPERATION: WHEN SHALL IT AND WHEN SHALL IT NOT BE PERFORMED?

He summarized his conclusions as follows:

1. It is evident that the operation has been performed unnecessarily for symptoms similar to but other than those arising from lacerations of the cervix. Further that it has been done imperfectly, even without preliminary treatment, in many more; and the failure to give relief, as reported by several, is due to these two causes.

2. That from our present knowledge we cannot, at this time, arrive at any definite conclusion, from the fact that many of the so-called consequences of lacerations of the cervix uteri are not settled beyond doubt.

3. That every one engaged in this department should carefully select his cases, and try every known means to give relief before resource is had to operation.

4. The operation should never be performed *eo ipso* in cases of simple fissures or lacerations of first and second degree.

5. In cases of eversion and disease of the cervical or corporeal cavity, or both, although attended by hyperplasia and displacement, it has been observed that all the symptoms abated and the parts returned to their natural condition, and that no laceration was discoverable after alleviative measures were instituted first, which alone caused the parts to return to a normal condition.

6. There are some cases of extensive lacerations of cervix that seldom give rise to any inconvenience, and that, therefore, an operation should be deferred until symptoms arise that will call for its performance.

7. The operation, although indicated, should never be performed until, by preparatory treatment, the parts have been brought into a healthy condition.

8. Near, and during, the climacteric period the operation should be postponed as long as possible, and the patient not exposed to any risks, since in many cases all the symptoms subside under proper treatment, and never return on account of senile involution.

9. The operation is justifiable in cases of lacerations of the third and fourth degree, without complications, if there is a history of malignant disease in the family.

10. The operation may be performed with perfect propriety in young women, as a preventive, if the laceration is bilateral and extends up to the cervico-vaginal junction, or beyond it, even though there are no pathological changes; indeed, it seems to be the duty of every one who observes a lesion to that extent, to urge the operation.

11. The operation is justifiable in any degree of laceration, and in rare instances even in fissures, when there exist cicatricial tissues, productive of reflex disturbances, annoying in character, and not tractable to any other treatment.

12. The operation is absolutely indicated in all extensive tears of the os in which the cervix is everted, its mucous membrane and the Nabothian follicles diseased, and especially if there be granular or cystic degeneration present, provided, the parts have first been restored to a healthy condition by palliative treatment.

Dr. Harvey, of Indiana, said there was frequently very much less pain in extensive than slight laceration. When there is extensive eversion, the parts are covered in time with cicatricial tissue, and are relatively non-

sensitive. When a fissure exists in the cervix, it is productive of much the same reflex symptoms as a fissure *in ano*. Moreover, while upon a cursory examination, the laceration may be apparently slight, if the lips were everted it will be found that the laceration has taken on larger proportions higher up. For these cases of slight lacerations—fissures, so to speak—cauterization and deep incision will not suffice; they require Emmet's operation.

Dr. Wathen, of Kentucky, said each case must be an individuality. The preparatory treatment is the best test as to the urgency of the indication for operation; such cases are cured by the preparatory treatment.

Dr. Gordon, of Maine, said that Emmet had made the remark over and over again that epithelioma of the cervix had never occurred in any of the cases coming under his observation without an antecedent laceration. But, although, admitting laceration to be a potent factor in the production of cancer, he did not advise closure of the laceration in every case, irrespective of its condition. Dr. Emmet was clearly inconsistent. Dr. Gordon had operated 225 times with one death. He agreed with Dr. Harvey in his remarks. Dr. Gordon does not believe in such long preparatory treatment; as said by Peaslee, chronic inflammation is a misnomer. Inflammation is a process rarely lasting over seven or eight days; subsequently, there exist the products of inflammation merely—*i. e.*, chronic congestion. He had treated successfully cases refused admission at the Woman's Hospital of New York, because there was too much inflammation.

Dr. King, of Missouri, thought there was greater danger of the development of cancer in case of slight lacerations than in larger ones.

Dr. Carstens, of Detroit, thought that all lacerations should be operated upon. An ulcer on either lip of the buccal orifice is excised if it does not heal spontaneously; the same line of reasoning ought to apply to lacerations of the cervix.

Dr. Battey, of Georgia, was never impressed with the opposite character of the argument which would unite laceration of the cervix and epithelioma as cause and effect; with equal force, labor itself might be urged as a factor in cancer. He had seen extensive lacerations cured by local treatment.

Dr. Sutton, of Pennsylvania, said that he had operated in cases of lacerated cervix merely to satisfy the patient. Epithelioma occurred in the cervixes of virgins; he had seen numerous cases of this kind in Martin's clinic at Berlin.

Dr. S. C. Gordon, of Portland, Maine, read a paper entitled

REASONS FOR AND RESULTS OF SOME CASES OF TAIT'S OPERATION.

At the last International Medical Congress, Sir Spencer Wells, in commenting upon a paper presented by Koeberle, of Strasburg, said: "As to castration of women for nervous diseases, we might just as well go about

the country cupping men for similar diseases as to do what is being done, in removing ovaries of women." In reply to Dr. Gordon's direct question, he said, "I believe that in no case should the ovaries of a woman be removed unless we can demonstrate beyond all doubt that there is actual disease." In reply to the question, "Do you mean by demonstration only that which can be made by touch?" he said, "Yes. most emphatically." Dr. Gordon then related detailed histories of several cases in which one or both ovaries or tubes had been removed. Improvement in symptoms was observed in each case and in some of them a radical cure was effected. Dr. Gordon concludes that a close analysis of subjective symptoms, through a long period of time, is frequently adequate to establish the diagnosis of disease of ovaries and tubes, and indicate operation when absolutely nothing of a positive character can be ascertained by physical exploration. Sir Spencer Wells' well-known aversion to Mr. Lawson Tait probably influences his judgment to an undue degree. Some of these subjective signs are premenstrual pain, irregularity of menstrual function, alternate pallor and flushing of face, an extraordinary mahogany-bronze color of the complexion resembling that of Addison's disease. Dr. Gordon observes no antiseptic precautions. He is clean, and uses hot water.

Dr. B. E. Hadra, of San Antonio, Texas, presented a paper entitled
INTRAPERITONEAL ADHESIONS CONSIDERED IN RELATION TO BATTEY'S
AND TAIT'S OPERATION.

He concludes from the detailed consideration of four cases, taken as types, that intraperitoneal adhesions may exist high up in the abdominal cavity, between various portions of the intestines, and that in all cases of abdominal section, after examination of the uterus and annexa, the hand should be made to search for such adhesions.

Dr. Battey, of Georgia, thought that any aversion to Lawson Tait upon the part of Sir Spencer Wells would not influence his judgment. Both Sir Spencer Wells and Mathews Duncan had told him in London, a few months since, that the scope of Battey's or Tait's operation is limited; the former operator had seen but two cases, the latter but one case, in which the operation was deemed expedient.

It is necessary, in estimating the results of the operation, to allow a sufficient interval of time to elapse. The immediate effect is always favorable. Almost any operation which draws blood will do the patient, if she is a woman, good. But then there comes a reaction, and she feels the improvement is imaginary. Cheer her up. Wait for the expiration of one and a half to two years before reporting your cases. The results of the operation are uniformly favorable.

With reference to the introduction of the hand to search for adhesions, as suggested by Dr. Hadra, he had little doubt that some good is effected.

But this may arise from (1) traumatism, (2) imagination, (3) the actual severing of incarcerating bands. These bands, however, may form again.

Dr. Sutton, of Pennsylvania, called attention to the importance of always telling the patient that merely an exploratory incision is to be made, and then of being prepared for any emergency that may arise.

Dr. Harvey, of Indiana, called attention to the influence of Battey's and Tait's operation in causing involution upon chronic hypertrophy or hyperplasia of the cervix, and indeed of the *corpus uteri*.

Dr. Wathen, of Kentucky, thought that the line of diagnosis advocated by Dr. Gordon is pernicious in its tendencies. Objective diagnosis is more reliable, although it must not be relied upon exclusively.

Adjourned.—*Medical News*.

ACADEMY OF MEDICINE IN IRELAND: OBSTETRICAL SECTION.

LOMBE ATTHILL, M. D., President in the Chair.

Friday, March 6th 1885.

UTERINE TUMORS.—*Dr. More Madden* exhibited five uterine tumors, which he had recently removed from patients in the Mater Misericordiæ Hospital, in illustration of his paper upon the treatment of uterine fibromyomata. The history of these cases was as follows :

Case 1. Recurrent Fibroid; Ecrasement.—T. K., aged 28, unmarried, was admitted on January 4th. Two years previously she had been under Dr. Madden's care in the hospital, suffering from menorrhagia. The uterine cavity was then dilated, and a small pedunculated myoma, growing from the anterior wall, removed. At the same time a second larger tumor was discovered deep within the posterior wall. The menorrhagia subsided in great measure, and she left the hospital. Some months later, it again commenced; and for the past eighteen months she lost a considerable amount of blood, and when readmitted, was in an extremely exhausted condition. The os was dilated in the usual way, and next day the tumor, now as large as a foetal head, had developed into the uterine cavity, and become pedunculated. The pedicle, which was extremely thick, was divided by ecrasement, and the tumor extracted. She made a good recovery.

Case 2. Submucous Fibromyoma removed by Ecraseur.—S. Q., a married woman, aged 44, who had miscarriages but no family, was admitted on January 14th, suffering from profuse metrorrhagia, and frequent attacks of intense uterine colic. These symptoms had been first observed eighteen months before admission, and on examination a small tumor could be felt above the pubes. The uterus was enlarged and drawn up. The sound could not be passed in any direction more than an inch above the

os internum, but on recto-abdominal examination the size and portion of the uterus, which was slightly retroflexed, could readily be made out. Being placed under ether, rapid dilatation of the cervix was effected by Lawson Tait's dilators, and then by the fingers. The cavity of the uterus thus laid open was found distended by a large pedunculated submucous fibro-myoma, around which, as being tightly incircled by the uterine walls, the steel wire loop of the écraseur was, with some difficulty, slipped up to its attachment to the posterior wall, close to the fundus. The thick pedicle was then slowly divided, but no amount of tractile force with two strong vulsella could extract the tumor through the uterine outlet, until a free bilateral division of the os and cervical zone was made, and in this way the tumor was removed. In doing so, some disruption of the perinæum was necessarily produced. This was immediately treated by a couple of silver wire sutures. The after treatment consisted mainly in hot antiseptic injections twice a day. Within a fortnight's time she was perfectly convalescent. Subsequently, she was attacked by typhoid fever, of which she died.

Case 3. Intramural Fibro-myoma removed by Enucleation.—L. B., an anæmic looking woman, aged 38, unmarried, suffering from metrorrhagia, pelvic pain, and hemorrhage, was admitted to the hospital. Until two years previously, she had been in good health. She then commenced to suffer from menorrhagia, which gradually increased, and the intervals between the recurrence of the discharge became so diminished that for a year she was seldom a week free from hemorrhage. On examination, the uterus was found retroverted by a tumor in the posterior wall, and the uterine cavity greatly elongated. The cervical canal was dilated by laminaria-bougies; on the removal of which she was etherised, and a submucous tumor discovered occupying the posterior wall from the fundus to near the cervix, and bulging into the uterine cavity. A free longitudinal incision was made through the thinned muscular structure into the capsule of the tumor, which was firmly seized with a strong vulsellum, and drawn down towards the outlet, whilst the loose adhesions around and behind the tumor were rapidly separated with the finger. This was now forced out of its bed, and extracted *per vaginam*. Immediately afterwards a hot carbolized water injection was thrown up to arrest the free oozing, a tampon of Lawson's cotton, saturated in carbolized glycerine, was introduced, and an anodyne suppository placed in the rectum. The hot water injection was continued twice daily for the next ten days, at the end of which the uterus, being still large, was brushed out at intervals with tincture of iodine until it had nearly regained its normal size, and in three weeks after the operation she was enabled to leave the hospital.

Case 4. Interstitial Myoma removed by Emmet's Operation.—This patient, a multipara, aged 42, had enjoyed good health until the birth of her last

child, four years previously. Shortly afterwards she became a widow. She then began to suffer from menorrhagia, tenesmus, and bladder-irritation, and bearing-down sensation, which increased. At last she was forced to give up her occupation as a farmer's servant. On admission, the uterus was found completely retroverted, and on endo-uterine exploration a considerable sized tumor was found bulging into the uterine cavity. An attempt was made to remove this by enucleation; but, on making an incision for this purpose, it became obvious that the tumor was not separated by any capsule from the uterine wall. Hence, it was resolved to try to effect its removal by Dr. Emmet's traction-operation. For this purpose, the most prominent portion of the tumor was firmly grasped by vulsellum and forcibly dragged down through the os as far as possible into the vagina. Here as much of the growth as could be reached was cut away with strong curved scissors. The resulting hemorrhage was checked by hot water injections, and the remaining portion of the tumor was again similarly treated. In this way, more than two-thirds of the growth were removed, when the patient became collapsed. A hypodermic injection of ether was administered, and she was put back to bed. For the two days following, her condition was apparently satisfactory, her pulse fairly good, and temperature not rising above 100°. On the second night after the operation, she again became collapsed, and sank, and died.

Case 5. Pedunculated Submucous Fibroid removed by Ecrasement.—A widow, aged 50, who had had several children, was admitted, suffering from continual uterine hemorrhage and offensive leucorrhœal discharge. On examination, the uterus was found occupied by a tumor as large as the foetal head at full term. The os was rapidly dilated, and this growth, which proved a semi-pedunculated submucous fibroid, was removed by écrasement in the usual way. After this she recovered rapidly.

TREATMENT OF UTERINE FIBRO-MYOMATA.—*Dr. More Madden* subsequently read a paper on the treatment of uterine fibro-myomata, as exemplified in his own gynecological hospital practice during the past fifteen years.

Dr. Kidd agreed with Dr. More Madden that the prevailing epidemic of laparotomies needed to be stayed. Capital operations should only be performed when the risk to life was imminent. The treatment required would vary with the site of the tumor—submucous, interstitial, or subserous. If necessary, the first two classes of uterine myomata might be removed by enucleation. The submucous variety caused most trouble and danger to life through accompanying hemorrhage; but interstitial tumors might grow towards the mucous surface, and so become practically submucous. In the same way, these tumors might become subserous. The latter class very seldom gave rise to really threatening symptoms such as alone would justify serious operations being undertaken for their removal.

Mere inconvenience and some amount of pain would not justify laparotomy. Serious difficulty in defæcation rarely occurred in connection with these tumors; but micturition might be so difficult as to call for the use of a catheter. He had generally found it possible to relieve such symptoms by lifting the tumor out of the pelvis. He knew many cases in which very large uterine tumors had existed for many years without giving rise to any real danger to life, even though the abdominal and thoracic viscera were much pressed upon and displaced.

Dr. Macan said that every one would agree that, in the absence of proper indications, serious operations should not be undertaken. Enucleation, as an operation, he regarded as infinitely more dangerous than a laparotomy. He did not accept *Dr. More Madden's* faith in the efficacy of subcutaneous injections of ergotin. *Schroeder* had laid down very clear rules and indications for the performance of myomotomy. It was called for in the case of a rapidly growing tumor in a young woman, when it gave rise to excessive bleeding or pressure-effects, or when it interfered with the patient's power of earning her bread. Other indications sometimes requiring operative interference were, according to *Schroeder*, complication with ascites or with pregnancy.

Another rarer indication consisted in evidences of sloughing of the tumor. Removal of the ovaries might in many cases be preferable to myomotomy, but *Batley's* operation was very difficult and sometimes almost impossible in the cases of large tumors.

The President pointed out that all the tumors presented by *Dr. Madden*, except one, were intra-uterine and pedunculated. He entirely differed from *Dr. More Madden* in his estimate of the difficulties and dangers of enucleation. More difficult and less successful operations he had never performed. In his experience enucleation was most often left unfinished. Myomotomy he looked on as a very dangerous operation, not to be undertaken without the clearest indications. Death from pressure or from bleeding was very exceptional in these cases. He had entirely lost faith in subcutaneous injections of ergotin. It could only be of possible use in the case of intramural tumors. He had lately practiced incision over the tumor, with subsequent injection of iodized phenol into the cavity of the uterus at fortnightly intervals, with very distinct advantage.

Dr. Byrne and *Dr. Purefoy* having spoken, *Dr. More Madden* replied, and the Section adjourned.—*British Medical Journal*.

For Constipation in Young Children.—*Dr. Poulain*, in the *British Medical Journal*, extols the use of a tablespoonful of fine bran night and morning, in a cup of bread and milk. The bran is warmed in the milk and then poured on the bread.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, May 7, 1885.

The President, B. F. BAER, M.D., in the Chair.

The President read the following report of a case of

SECONDARY OVARIOTOMY,

and exhibited the specimen, a small papillomatous cyst :

Mrs. S., æt. 33, married first at fifteen years of age ; became a widow at twenty and remarried at twenty-five. Had one child only, by the first marriage, seventeen years ago. Enjoyed good health, except that she has always been very nervous, until nine years ago, when she suffered from an inflammation in the pelvic region, which confined her to bed six weeks. Has suffered ever since from profuse and frequent metrorrhagia with paroxysms of left ovarian pain. About four years ago she also began to suffer from hysterical attacks of an epileptiform character. Two years after these nervous manifestations appeared—in the spring of 1883—she noticed that her abdomen was beginning to swell. The growth continued to increase and with it the metrorrhagia, pain and epileptiform seizures. She also lost flesh rapidly and became weak and bed-ridden. In January, 1884, ovariectomy was performed. After her recovery, which was slow, and despaired of for some time, she enjoyed comparatively good health. The menstrual flow became regular and painless and the convulsions ceased entirely. But in the September following she had another attack of uterine hemorrhage which lasted three weeks. Pain also returned, in character like that attending the development of the first tumor, but it was now located on the right side instead of the left. In October she consulted my friend, Dr. D. J. Miller ; pain and hemorrhage were at this time very severe and she was weak and anæmic. On examination, Dr. Miller found an abnormal development, in the region of the right broad ligament, about the size of an egg. This was closely adherent to and apparently within the folds of the ligament. It was very tender to the touch, but there were no constitutional evidences of acute inflammation. Shortly after this she had a recurrence of the epileptiform convulsions. Treatment seemed to control the symptoms for a time, but from the latter part of December they increased steadily. The constant drain from the metrorrhagia, the increasing violence and frequency of the paroxysms of pain and the convulsive attacks began to tell in a marked degree upon her health in loss of flesh and strength. In February, 1885, through the kindness of Dr. Miller, I saw the patient. At that time the growth had attained the size of a large orange ; it occupied the right side of the pelvis, displacing the uterus to the left and seemed to be closely attached to the broad ligament and the uterus. I agreed with Dr. Miller's diagnosis of ovarian cystic disease, and although the tumor was evidently adherent to the uterus and broad ligament and therefore proba-

bly did not have a pedicle. I advised its removal for the relief of the grave symptoms.

Operation—April 7th, 1885, at 12 m., assisted by Drs. D. J. Miller, Ed. H. Small and G. P. Perley; in the presence of Drs. B. C. Miller and Plummer. Incision, one-half inch to right of old cicatrix, three inches in length, passing through the body of the right rectus muscle. After clamping all bleeding vessels, I opened the peritoneal cavity and found that the omentum was adherent to the line of union of the first incision, which had been about eight inches in length; and that adhesions also existed between portions of intestine and the location of the former pedicle on the left of the uterus. The necessity of pushing the omentum and intestine aside to get at the tumor and fear of breaking the adhesions by so doing, together with the small size and deep-seated location of the cyst, made the required manipulations exceedingly difficult. When I obtained a view of the upper surface of the tumor, it looked not unlike the pregnant uterus in color and vascularity. Its outer wall was interlaced with a network of veins, some of them as large as a quill. Exploration with the fingers showed it to be so deep in the pelvis and so closely attached to the uterus, fallopian tubes and broad ligament that they seemed to be one mass, the whole attached by a broad surface to the pelvic floor. The prospect of completing the operation was now anything but bright, because of the danger of opening this very vascular wall for the purpose of enucleation. But I began with an attempt to separate adhesions, and after patient, gentle, but persistent efforts they began to yield and I was finally enabled to get two fingers around the posterior surface of the tumor without producing much hemorrhage. I next passed a small trocar of the aspirator and drew off about six ounces of a straw-colored fluid; this gave me a little more room and I now hoped to be able to remove the tumor entire, and with that purpose in view I endeavored to still further separate it from its attachments; but so much hemorrhage occurred that I was compelled to desist. I next very carefully broke the outer wall of the cyst with my finger and proceeded to shell out the lining membrane; but it was so friable that it gave way and my finger entered the cavity of the partially collapsed sac. I found it filled with a papillary cauliflower-like growth. This I removed to prevent its escape into the peritoneal cavity where I feared it might propagate by contact if lost and allowed to remain. I then completed the enucleation of the internal surface of the tumor. The thick and vascular external wall was now so thinned and drawn out that it formed a sort of pedicle. This I transfixed and ligatured, cutting away the redundant portion. Then, after thoroughly removing all foreign material, I closed the abdominal incision with seven silk sutures and returned the patient to bed. She recovered promptly from the ether, showing no evidence of shock. At 8 p.m. her temperature was normal and pulse 126. On the

evening of the second day her temperature rose to 101° and a free metrorrhagia occurred. The temperature fell within a few hours to 99.4° and did not afterwards rise above 100° . On the fourth day I found union so complete and solid that I removed the sutures. She sat up on the nineteenth day and has now entirely recovered from the operation. The result on the hystero-epilepsy and other nervous symptoms will be reported later by Dr. Miller. It is of vital importance to every woman who must submit to the operation of ovariectomy, that the condition of the opposite ovary should be thoroughly investigated. If found to be diseased, even slightly, I think it should be removed to shield the patient from the danger of a probable second operation. But when such nervous symptoms as existed in this case are present, though the opposite ovary should be found to be healthy, I think it is imperative upon the surgeon to remove it with the hope of relieving these symptoms. It does not add much to the danger of the operation; indeed, in my own practice it would seem to have had the reverse effect, for I have lost but a single case of double ovariectomy, though about one-third of my cases have been of that character.

Dr. Montgomery takes exception to the statement of advisability of removal of the other ovary. The second ovary, even if slightly diseased, may be the source of repeated pregnancies. He had, in one case of ovariectomy, left the other ovary although it was enlarged and contained several small cysts; pregnancies and the delivery of living children occurred subsequently, but there has been no sign of another ovarian tumor. In some cases it might be advisable, but no such fixed rule should be formulated.

Dr. Goodell has performed 144 ovariectomies, and has had secondary operation in two of them in which the remaining ovary was apparently unaffected at the time of the primary operation. In all cases after the menopause he now removes the second ovary, even if it seems to be perfectly healthy.

The President was much gratified to have Dr. Goodell's endorsement of his opinion upon the advisability of the removal of the second ovary.

Dr. Montgomery reported an

OÖPHORECTOMY.

Mrs. C., aged 42, consulted me in November, 1884, with the following history: She is married, but never became pregnant. Menstruated once when fourteen and not again until seventeen, when she became regular, but the flow was always preceded for a few days by severe cramp-like pains which continued during the menstrual period. In her earlier menstrual life, the flow was quite free, but later it has been scanty. The pain was felt in the back and in each inguinal region. She had an attack of small-pox during her fourteenth year, but otherwise had enjoyed good health until a few years ago. Two years since she noticed that she

was losing flesh ; her appetite became poor, she had constant nausea and frequent vomiting ; the pain in the back and inguinal regions occurred in the after part of each day, was exceedingly distressing and interfered with her rest at night. This pain was greatly aggravated by walking, standing, riding in cars and by coition. When she came under my care she had lost considerable flesh, had a very irritable stomach and was not free from pain an entire day at a time. The uterus was retroverted, apparently bound down to a thickened mass posteriorly and presented a catarrhal endometritis. Pressure upon the fornix vaginæ gave rise to severe pain. Some efforts were made to raise the uterus by means of tampons of cotton, but they only increased the pain. The patient soon became unable to move about and was confined continuously to bed. The pain was constant during the greater part of the 24 hours, so that during the last three months she had had but three nights of uninterrupted sleep, though morphia was given daily. The trouble, from the first, had been ascribed to ovarian disease, and every effort was made to improve her condition preparatory to the removal of the ovaries, but without avail. Her emaciation became extreme, when it was decided to run the risk of the operation. At this time her menses had been absent about two months.

April 12th, assisted by Drs. W. H. and C. B. Warder and Dr. Martin, the ovaries were removed. They were situated in Douglas's cul-de-sac behind and beneath the uterus, and were slightly adherent. Both ovaries were enlarged and hard, and presented a number of small cysts. The latter were found also in the broad ligaments. The wound was closed with silk sutures and dressed with salicylated cotton. Her subsequent comfort was very much interfered with by the pressure from lying, which in spite of all precautions produced a small slough over the sacrum. Her highest temperature, 102° , was reached at 6 p. m. on the 20th. The wound healed by first intention. The sutures were removed on the sixth day. After the third day no anodyne was given, but she slept nine hours each night. All her old distressing symptoms vanished as by magic, her appetite and digestion became good, and she began to improve in general appearance. There has been no recurrence of the pain since the operation.

Dr. Henry Beates read a clinical report of a case of

CONDYLOMA URETHRÆ,

It having closely simulated epithelioma in appearance. As the routine notes will be uninteresting, they will be omitted. Mrs. D., nullipara, æt. 29, sought relief from an intense dysuria, which was of a little more than a year's duration. A history indicating an attack of gonorrhœa, while not positive, was sufficient to render it probable. A year or two after marriage she was attacked with either acute cystitis, urethritis, or gonorrhea, which disappeared, but was followed after a lapse of two or three months

by frequent micturition and vesical tenesmus. After a few weeks a urethral discharge, purulent in character, was noticed, followed soon after by the development of condylomata on the margin of the meatus urinarius. Co-incidentally the tenesmus and dysuria increased, and by interference with sleep, and suffering entailed, resulted in impairment of health. Remedies had been prescribed, but no examination of the local condition made. When first seen, the patient was almost constantly harassed with tenesmus, and was suffering greatly. She would retain the urine as long as possible, and void it only when the voluntary control of the bladder was overcome by the vesical contraction. Examination revealed numerous condylomata originating from the margin of the meatus and interior of the urethra. The meatus and its surrounding neoplasms were bathed in a sanguineo-purulent fluid, and the inferior border and membrane of the vestibule were the seat of destructive ulceration. This latter so closely simulated the appearances seen in ulcerating epithelioma, that that diagnosis was made by a gentleman who saw the case with me. The external growths were snipped off with scissors, and the bleeding bases staunched with nitric acid. After a short preparatory treatment, anæsthesia was produced, the urethra dilated, and the condylomata, which were numerous, and derived from the urethral membrane only, removed with the dull curette. A curious point was the distinct demarcation of the morbid condition, which was limited to the vesical terminus of the canal, and the perfect freedom of the vesical membrane from the growths. A solution of chloral, iodine and carbolic acid was thoroughly applied, and had the effect of stopping the hemorrhage. The ulcerated tissues and a portion of the urethral flow were incised, and the margins treated with nitric acid. The microscope revealed hypertrophy of the mucosa, with increase of epithelial elements and capillaries. Four years have elapsed and no evidences of return have presented themselves. I believe the cause of these condylomata to have been a specific urethritis, which becoming chronic, by its irritating discharge determined the growths.

LEIOMYOMA UTERI.

Mrs. M., German, æt. 37, mother of one child, history free from neoplastic predisposition. At 13 the catamenial function was started, and became regular soon. Congestive dysmenorrhea for a few months at first, once every twenty-eight days, lasting four days. Married at nineteen, conceived two years later, delivery at term after a tedious instrumental labor. About a year later a steadily increasing menorrhagia commenced, with leucorrhea. She was unsuccessfully treated for this for two years, and came under the care of a well known practitioner of Philadelphia, since deceased, who introduced pieces of lunar caustic into the uterine cavity, and allowed them to remain there until dissolved. After a few weeks the menorrhagia was relieved, and fair health was enjoyed for more than two years. The hemorrhage recurring, she again visited Philadel-

phia, and was treated with the dull curette and endometrial applications. She remained free from her trouble for three years, during which time she met with financial reverses, and was subjected to the depressing influence of trouble. She had never been impregnated since the birth of her only child. Hemorrhage recurring, she entered a hospital in western Penna., where she remained two years under unsuccessful treatment. All treatment was abandoned, and the hemorrhagic condition suffered for nearly five years, when threatening death again brought her to Philadelphia. She attended the Nurses' Home Charity, where I saw her, as an assistant in 1879. Her treatment included iodine to the cavity, ergot and gallic acid internally, and the curette. In October of the same year she placed herself under my care. I was called to see her, and found her in a state of profound syncope. She had occasionally manifested mental aberration, due entirely to the exsanguinous state, and for two or three months was bleeding almost constantly. A laminaria tent was promptly placed, and a thorough examination made, which disclosed the presence of a neoplasm occupying the right lateral and posterior uterine wall. Its contour was regular, base broad, consistence that of uterine tissue. Its submucous location was determined and enucleation effected. The growth was as large as a doubled fist, and required division before it could be delivered. It weighed nine ounces. Profuse bleeding occurred during the operation, and the shock was alarming. Reaction, however, occurred. Microscopic examination revealed a typical leiomyoma uteri, of the telangiectatic type. When last heard from, a few months ago, she was enjoying excellent health.

OVARIAN CYSTOMATA.

CASE 1.—A lady 51 years of age. The sac was aspirated and 37 pints of typical ovarian fluid removed in February. By May the cyst had refilled and the tumor was removed. The room was heated to 80° and a steam atomizer nebulizing carbolized water was kept in constant action. In casein 5½ inches, bleeding points secured before opening peritoneal cavity, no adhesions, pedicle dropped. The sutures of silver wire used in closing the abdominal wound was inserted in such a way that the peritoneal surfaces were apposed fully ¾ inch below the incised edges. The dressing consisted of adhesive strips antiseptic gauze, absorbent cotton and a flannel binder over all. The convalescence was pyrocical, characterized by abrupt accerbatations on the 7th and 13th days. Sitting up on 28th day; recovery good. The pyrocical convalescence I attribute to the use of carbolic acid and the heat exhaustive induced by the absurd custom of maintaining a close, moist atmosphere during the operation.

CASE 2.—A lady aged 51. Menopause four years ago; notice an abdominal tumor at the time of change. This would diminish in size during the catamenia. The past two years the suffering has been great and

while the tumor is of medium size the disturbance of the digestive functions are as great as those encountered in enormously developed cysts. Sleep for the past few months has been seriously interrupted. In January, 1884, her health not admitting surgical procedures, and in consequence of fever and pain in the sac, aggravated by the least movement, indicating an acute inflammatory condition, I aspirated with the view of removing what I believed to be the determining cause of the inflammatory attack, over distention and also to prevent additional adhesions from forming. I withdrew eighteen pints of dark chocolate colored fluid which was typically ovarian, but contained a large amount of cholesterine. The result of the aspiration was every thing to be desired; the pyrexia promptly disappeared, sleep was secured, the digestive function returned and a rapid gain of strength established. By April the sac was so filled as to again occasion constitutional disturbance and ovariectomy was performed. This time I abandoned entirely, carbolic acid and the overheated moist and oppressive atmosphere. Strict cleanliness was observed and corrosive sublimate used with the atomizer remote from the patient. The temperature was maintained as nearly as possible at 70° . In an omental adhesion was found a large artery which was the chief source of blood supply to the cyst wall. The pedicle was found to be a tendinous like structure. The sac was almost universally adherent in the pelvic cavity and adhesions were especially strong over the broad ligament and pendus uteri. These were so developed that it was considered by a gentleman present an impossibility to affect removal. In dealing with this complication the fundus-uteri was deprived of its thickness peritoneal covering and the peruchynea exposed. This was the source of hemorrhage which was stopped by dissecting up flaps on the anterior and posterior aspects and bringing them together over the bleeding surface and securing with six interrupted silk sutures. After removal of the sac and the introduction of the abdominal sutures, and just as I was about to close the wound, there welled up blood. The cavity was quickly reopened, and the bleeding surface was discovered after lengthening the incision to a point above the umbilicus and well down over the pubis. The hemorrhage originated in the separated folds of the broad ligament and was only stopped after numerous silk ligatures had been applied, between fifty and sixty were required within the pelvis and abdominal cavities before bleeding was well controlled. Failing to secure a bleeding point in a pocket monsel's solution was applied. The operation occupied two hours and thirty-five minutes. One and a half pounds of ether was consumed. The temperature of the patient after the operation was over was $94.2-5^{\circ}$ and attention is here called to a point which is, *the determination of the degree of depression of temperature to which it is safe to subject a patient during a surgical procedure.* In ovariectomy where the securing of bleeding areas is an essential to success the import of this

can easily be appreciated and if a definite knowledge can be established there will not be a fatal case due to septic complications, the direct result of oosing that might be prevented. Reaction was prompt. Dressing as before. Tympanitis developed during the next twelve hours, and to a degree that jeopardized life. This was overcome with the faradic current, anti-ferments and the rectal tube. There was no pyrecocial complications, and recovery was without further untoward symptoms.

CASE 3.—A young married lady, æt 25, suffered from an ovarian tumor, which developed within a period of nine months. The cool rooms, absence of carbolic acid, and strict cleanliness characterized the conditions of the operation. Corrosive sublimate was the antiseptic employed. The operation was uncomplicated and recovery was prompt.

DISCUSSION.

Dr. Goodell complimented *Dr. Bates* on the case requiring many ligatures, as nothing is so demoralizing as free hemorrhage, as a complication in abdominal surgery. He criticizes the $\frac{3}{4}$ inch application of peritoneal surfaces, as it is likely to fall into the wound when closing it, and cause faulty union.

He inquired about *Dr. Bates* experience as to hernia after abdominal section. He doubted the necessity of the rule to avoid section of the recti muscles. If in inserting stitches in closing the wound, good co-aptation of the muscles be secured, hernia would probably be less likely to happen. He prefers silk sutures to metal ones for closing the abdominal wound, as they may all be inserted and sponges used to catch any bleeding, before any of them are closed.

Dr. Montgomery remarked that some operator (name forgotten) had proposed section of the recti muscles for the express purpose of securing good co-aptation. He has tried this method and has secured good results and no hernia.

Dr. Parish has passed sutures through the recti muscles and has had good results and no hernia. He uses silk, and has not been troubled with suppuration along the suture tract.

The President thinks that if an operator ever uses silk sutures he will not again use silver wire. In the case he reported this evening the incision was necessarily through a recti muscle. He had perfect union and no suppuration.

Dr. Beates had never had a hernia resulting from abdominal section. In the second case violent retching and vomiting caused him great anxiety, but the sutures held firmly and union was firm throughout. In the second and third cases silk sutures were used but pus formed in their tracks in six or seven days.

Dr. Goodell exhibited specimens of

PAPILLARY OVARIAN CYST.

removed from two women, with the following history:

The first one had been removed on March 29th, at the University Hospital, from a woman who had borne two children by her first husband, but had not conceived since her second marriage, seven years ago. The cyst was of the right ovary, weighed about twenty pounds, and its lower portion had to be enucleated from the broad ligament which overlapped it. It had burst a few hours before the operation and the abdomen was filled with a dark, syrupy fluid. The special point of interest was the papillary growths found in large numbers both on the inside and the outside of the cyst wall. The broad ligament and pelvic peritoneum were also studded with them, and the left ovary, otherwise healthy, was so bound down and enveloped with them as to make its removal impossible. The woman's convalescence was uninterrupted, yet Dr. Goodell could not but believe in the malignancy of the cyst, and he was disposed to attribute the patches of papilloma to infiltration from some previous rupture of the cyst wall, of which, however, there was no history.

The next two cases were operated on at his private hospital on the same day, April 17th, and both did well. In each case both ovaries were affected with extramural papillary growths, while in one of them the right cyst had evidently burst some weeks previously, as the abdomen contained a dirty fluid, and apart from the history of sudden abdominal pain, the ovary was represented by a mass of papilloma about the size of one's fist, around the base of which were the remains of the cyst wall.

These two cases he deemed benign because there seemed to be no infiltration outside of the ovary. They were probably cases in which the cystic degeneration began at the hilus of the ovary.

DISCUSSION.

The President remarked that these growths were found in almost all small ovarian cysts, especially when they were enveloped in the broad ligament. They are not malignant, but are of very rapid growth, and are accompanied by pain and local congestion.

Dr. Parish in one of his patients had found an ovarian tumor as large as a man's head. The other ovary was the size of a hen's egg, and its walls had undergone calcareous degeneration, the pedicle was short and calcareous; suppuration followed its removal, and a fistulous opening was left, probably depending on the presence of the calcareous matter.

Dr. Goodell also exhibited a calculus weighing over one and a half ounces, which he had removed a week ago. The lady was seventy-four years old, and was also aphasic and paralyzed from a stroke of apoplexy received five years previously. Ether was therefore administered with extreme caution, and fortunately no bad results followed its use. Find-

ing the stone to be a very large one, Dr. Goodell decided not to crush it, but to remove it by lithotomy. This was accordingly done, but a good deal of difficulty was experienced in coaxing the stone through the opening. On account of the cystitis present, the opening into the bladder was left unclosed, except at those points where sutures were introduced merely to stop troublesome hemorrhage. The relief was immediate and the convalescence uninterrupted.

ON THE USE OF THE OBSTETRIC FORCEPS AS A SPECULUM AND PROTECTION TO THE VAGINA IN OPERATIONS UPON THE FETUS AND UTERUS
BY DRS. JAS. PRICE AND G. G. FAUGHT.

Read by *Dr. Beates*.

Even a casual observance of the records of gynecology shows them to be scored over and over again with cases the sad history of which is the result of the reckless and unintelligent use of the obstetric forceps. The late Dr. John S. Parry gives the mortality of craniotomy as 37½ per cent. According to Dr. D. N. Agnew, *Surgery*, vol. 2, p. 821, "A fatality quite as great as that resulting from Cæsarean section. As a careful perusal of the writings of Schroeder, Tait, and others, shows how often this operation when styled "successfully done," is followed by genital fistulæ, extensive sloughing and cicatricial abscesses? we have good reason to believe that mutilations and contusions of the soft parts are no mean factors in accounting for the heavy mortality. Foreign reports indicate that the mortality was much greater abroad than in this city. A late Irish obstetrician reports six consecutive deaths after craniotomy. Though the conventionalities and artificial modes of living in the large cities of America might necessitate the more frequent performance of serious operations in childbirth, the more successful results must be attributed to the generally conservative teachings of our schools in regard to manipulations in deformed pelvis. It is to be regretted that exceptions to such teaching exist. A successful New York teacher, who boasts "three thousand cases and a year at Vienna," records one of his cases where the cephalotribe slipped eight times, the operation being completed with the blunt hook. Cases are known in which the cervix has been entirely cut away, and in trephining the base of the child's skull the mother's sacrum has been sawn into. With such records before them the writers felt that no apology is needed for presenting for the discussion of this society a new and wise use for the forceps as a protector of the soft parts and for fixation of the head during operations on the fetus. A justly celebrated writer and teacher of this city, after the publication of a paper advocating this measure, in the *Medical News*, August 3, 1884, called attention to the fact that the idea was not a new one, as shown by an extract from *Blasdel's Principles and Practice of Obstetrics*, published in 1834. The writers are well aware that the obstetrical works report cases

in which the head was perforated after ineffectual traction had been made with the forceps, without removing that instrument, and the delivery subsequently accomplished safely. (*Hodge's System of Obstetrics*, pp. 252, 272, etc.) The use of these previously reported cases was, however, clearly accidental. Indeed, the profession seems to have lost sight of the fact that the primal use of the speculum was to enable the operator to use craniotomy instruments safely and expeditiously. Abulcasis so using it in the eleventh century (quoted by Schroeder). The design of this paper is to claim the *intentional* use of the forceps as a protector of the soft parts of the mother and for fixation of the head. The only intentional use of the forceps in this manner known to the writers, was some years ago, by Dr. Forest Willard, a member of this Society. In using the forceps in the manner referred to in the title, when the destruction of the fetus is clearly indicated, a pair of forceps as wide in the blades as the diameter of the pelvis will admit, are applied in the ordinary way and used for fixation and compression of the head, while the vault is being perforated and broken or folded up, the retraction of the tissues by the instrument allowing safe and expeditious work. If preferred by the operator, the blades may be separated to their respective sides of the pelvis and held by assistants, recrossing and locking them to make compression and traction.

To represent the utility of the forceps under such circumstances, we cite the following cases:

CASE 1.—M. B. æt. 21, primipara, pelvis of masculine type, child's head unusually ossified, and its dimensions large absolutely and relatively. When Dr. Price saw her she had been in labor for a long period—as the pregnancy was illegitimate she had attempted to conceal the fact that she was in labor—the child was dead. The hand was presenting at the vulvar orifice, which was much swollen, and the woman's vital forces were failing. The hand and arm were returned to the uterine cavity and the head brought into position. As there was no expulsive efforts whatever, the forceps were applied; traction failed to engage the head. The safety of the mother demanded prompt removal of the child. Without removing the forceps, craniotomy was quickly performed after the method described. The mother's soft parts were entirely uninjured, and the woman made a prompt and satisfactory recovery. It seems hardly necessary to state that version was not attempted in this case because it was believed that the safety of the mother would be greatly compromised by turning and dragging through contracted and inflamed tissues a large, still child.

CASE 2.—Mrs. D., 28, second labor. The first labor, two years previously, had been a protracted forceps delivery. The present labor was seen in consultation; it was a summit presentation, and various forceps had been already unsuccessfully applied. A further attempt by Dr. Price was equally unsuccessful in causing the head to engage, its diame-

ters being at least an inch greater than those of the pelvic outlet. The forceps being in situ, a large male fetus was removed after perforating and crushing the head. The patient's recovery was all that could be desired. She has since borne a normal child, the labor being easy.

CASE 3.—A. G., aged 22; primipara, extreme angular curvature of the spine, and pelvis much narrowed in the conjugate diameter. The head presented, the occiput was posterior and unengaged. Dr. Knight applied the Davis forceps but was unable to change or co-engage the head. After a consultation with Drs. Hampton and Price, in which craniotomy was decided upon, a pair of Hodge forceps were applied, the blades separated to their respective sides of the pelvis and used as a speculum, etc., during the subsequent operative procedure. Except for a slight tear of the perineum, which afterwards healed perfectly without the use of stitches, made by the passage of the shoulders, the patient's recovery was uninterrupted and satisfactory. In this patient the undeveloped condition of the soft and the narrowness of the bony outlet would have rendered craniotomy by the old method a hazardous operation. Without wearying you by further statistics we may say that similar successful results have been attained in all our other cases, numbering four. The Hodge and Davis forceps were used in five of the operations; in the last two a special forceps, designed by Dr. Price and made for him by Mr. Rulba, having the following peculiarities:

1. Thin flat blades $1\frac{3}{4}$ inches wide, to allow easy application in markedly deformed pelvis.
2. The Hodge angulature for use at the superior strait.
3. The absence of fenestræ to increase the strength of the blades for powerful compression and traction and to afford more ample protection in operative procedure during perforature, etc.
4. A greater cephalic curve so that the points come in apposition to prevent slipping.
5. A screw at the end of the handles to cause greater compression than could otherwise be exerted.

Dr. Beates also exhibited another pair of forceps designed by Dr. Price, one blade of which terminated in a thin, flat sharp pointed perforator, this was covered with a leather shield to protect the soft parts during its introduction; this shield is not removed but the perforator cuts through it when it is pressed firmly against the fetal cranium. The other blades terminated in a blunt screw which is intended to be screwed into the spinal canal of the child for traction.

Dr. W. H. Parish reported an

ALEXANDER OPERATION.

In December, 1881, Dr. William Alexander, of the Liverpool Parish Infirmary, performed for the first time what is now known as the Alexander Operation. His patient had a retroflexed and prolapsed uterus, but

did not get rid of the cystocele. In 1884 he published his book on "*The treatment of Backward Displacements of the Uterus, and of Prolapsus-utero, by the new method of shortening the Round Ligaments.*" He then reports twenty-two cases operated on by himself, and other cases operated on by other surgeons. The conditions warranting the operation—conditions which the operation is expected to relieve—are posterior displacements, retroflexion or retroversion of the uterus. The operation is of little service in prolapse unaccompanied by either posterior displacement. It does not remedy a cystocele or a rectocele; neither does it take the place of an operation for remedying a laceration of a perineum. The operation as recommended by Dr. Alexander consists in making an incision down upon the external abdominal rings finding and seizing the ends of the round ligaments, drawing them out until taut, the uterus being at the time held in the position of anteversion by means of a sound in its cavity. The ligaments are then stitched in their taut condition to the columns of the rings, and the uterus kept from dragging too greatly on the round ligaments during the subsequent two months by means of a Hodge pessary, sometimes aided by a stem pessary. The abdominal incision heals generally by granulation, rarely by first intention. The relief of the uterine displacement in most of the cases reported seemed permanent, or at least the displacement had not recurred up to the date of publication. The operation is a bloodless one or nearly so, the danger trifling, and the result in favor of cures were satisfactory in the hands of Dr. Alexander and other English operators.

On December 30th, 1884, I did the Alexander operation on a patient in the Philadelphia Hospital. Her general condition was not very favorable for any operation. She was about 40 years of age, of small stature and in a debilitated condition. She suffered with a chronic bronchitis the uterus was in a condition of retroflexion and retroversion and was also prolapsed as to approach ordinarily the vaginal outlet, and when engaged in severe labor protruded, according to the patient's statement; but the latter statement may have been erroneous, as there was a rectocele of about the size of a hen's egg. There was also an old laceration of the perineum, one that extended nearly into the rectum. I performed the Alexander operation because of the uterine displacement. I did not expect to remedy except to a limited extent the prolapse of the uterus, or at all to get rid of the rectocele. I expected that a subsequent operation would be performed for the restoration of the perineum. After cutting down upon the right external ring, I found no difficulty in recognizing the terminal portion of the round ligament, or in causing it to run through the canal when drawn upon by the finger; it was about the size of a crow-quill, and did not suggest strength; it appeared in a condition of atrophy from the stretching to which it had long been subjected. The left ligament was also easily recognized, but it would not run through the

canal. It would not be drawn out, and doubtless was adherent to the canal and also held in the pelvis by abnormal adhesions dependent upon a pelvic cellulitis of old date. The right ligament was drawn out about two inches and cut off. The left one was shortened about half an inch. While the ligaments were being drawn out the uterus was held anteriorly in the median line by means of a uterine sound. The round ligament was then stitched to the columns of the rings, and the abdominal incision closed with silver wire and covered with iodoform dry dressing. A Hodge pessary was introduced and the patient placed in bed in dorsal recumbency with thigh flexed. The bronchitis was aggravated by the ether and severe coughing became very troublesome. The concussion of the coughing would at times force out the pessary. The abdominal wound healed in about three days by granulation, after limited erysipelas had appeared. The erysipelas was not severe and was probably dependant upon hospital influences. The posterior displacements were partially relieved, but I do not think the benefit secured to the patient amounts to a great deal. I have seen but one other Alexander operation reported in this country. I think the value of the operation should be tested. I am not enthusiastic in its favor, but am willing to give it a trial. Certainly it is not difficult; perhaps the chief difficulty consists in recognizing the round ligaments, but they are more easily found in the living than in the cadaver. There is no danger of hemorrhage, and apparently no danger of traumatic peritonitis. Probably the only source of danger is from septic infection, and this, under favorable surroundings could scarcely occur.

The President thinks that the operation will find many cases in which it will be valuable, for instance, cases of retroflexion without adhesions, and in which the pessary will get into the angle of the flexion and lose its usefulness, and in which a stem will not stay. It will be less dangerous than Tait's plan of laparotomy and stitching the uterus to the abdominal wall.

Dr. Parish remarked that *Dr. Alexander* recommended that both round ligaments should be drawn out before either of them were stitched. He recommends it for such cases as the President describes, but does not limit its usefulness to such. He also thinks it will prove a valuable auxiliary previous to operations for the cure of rectocele, cystocele and lacerated perineum.

W. H. H. GITHENS, M.D., *Secretary*.

THE Berlin correspondent of the *British Med. Journal* says that lately, in that city, a young lady called at a drug store and asked for some chlorate of potash as a gargle for a sore throat. She was told to take a teaspoonful from time to time. She took the powder, instead of dissolving it in water, and died in five days from vomiting and asthenia.

Abstracts and Selections.

I. — OBSTETRIC.

Female Diseases and Insanity.—In contrast with doctrinaire opinions advanced by many gynecologists with regard to the etiological influence of female diseases on insanity are the following statements of Dr. Margaret A. Cleves, of the Harrisburg Hospital for the Insane (Report for 1882-3): She does not believe it will ever be possible to diagnose the special form of uterine or ovarian disease from the mental symptoms. The menstrual life of insane women is in many cases irregular, but in her experience not in the majority of instances. Cases of acute insanity are often accompanied by complete cessation of menstrual function. This is popularly believed to be the cause, and that if it can be restored, the patient will be restored to mental health. In some exceptional cases such is the fact, but the suppression in most cases is the result and not the cause, the most cases do not call for treatment of the reproductive organs alone. On the other hand, she does not believe that the sexual disease produced by the insanity has a tendency to result in self-cure. Her experience with cases of circular insanity indicate this. Her present opinion is that at least thirty per cent. of insane women suffer from genital-organ disease. In a large proportion of cases these affections have a direct or indirect etiological influence. Those who recover after having their utero-ovarian disease treated are much more likely to remain in mental health. This, however, does not justify the belief that the percentage of recoveries will be increased by special treatment. The error that these diseases caused insanity, and that this cause being removed the effect ceased, was at first Dr. Cleaves' belief; the "vicious circle" was ignored. Experience has shown her the contrary.

Note on the Use of Iodide of Potassium in Inflamed Breast.—Samuel Welch, M. R. C. S. E., contributes the following to the *Medical Press*:—Having been frequently disappointed with the ordinary remedies in the highly troublesome condition arising from the presence of milk in the breast after the death of the child, or in cases of still-born children, and having found that the effects of belladonna are often uncertain, and that purgatives, although certainly useful, are frequently unreliable, I determined to try the effect of iodide of potassium applied locally in the form of an ointment, and I have met with great success from its use in this manner.

The system I pursue is the following:—I have the breast suspended in a sling to prevent all dragging, and pressure exerted on it by means of folded napkins. I then order a free inunction of the iodide of potassium ointment three times a day, administering purgatives internally. For

the first two or three days, should it be necessary, I have the milk drawn off once daily by the nurse, and find almost invariably that after a few days all troublesome symptoms pass away, and any anxiety on the score of the milk is removed.

Arresting Menstrual Discharge by the Internal Use of Vinegar.—In the *Russkria Meditzina*, No. 6, 1885, p. 128, Dr. Nekhamès, of Saratov, refers to an article by Dr. W. C. Grigg, in the *British Medical Journal*, Jan. 1884, p. 56, and mentions an instance of the hæmostatic action of vinegar taken internally. A strong and healthy lady, aged 24, with regular menses of six days duration, once happened to be invited to a ball on the third day of a catamenial period. To make herself fit for dancing she, at the recommendation of a lady friend, swallowed a glassful of vinegar. The catamenia at once ceased, and did not return for the remaining three days.—*London Medical Record*.

Multiple Pregnancy.—An account is given in *L'Echo d'Oran*, Feb. 14, 1885, of an Arab woman who gave birth at one confinement to five children, three of whom are still alive. The report seems to be well authenticated.—*Le Progrès Médical*.

Uncontrollable Hysterical Vomiting; Cure by Cocaine.—Professor Kohler has successfully employed cocaine in concentrated solution in several instances with noteworthy results. In one case he, without injury to his patient, sounded and dilated the larynx and trachea after application of the drug. In a second remarkable case, a hysterical woman was attacked with uncontrollable vomiting, from which she became so much reduced that to sustain her it became necessary to resort to peptonized enemata. The first application of the solution of cocaine enabled the woman to partake of liquids, and the second rendered the ingestion of solid food possible. On abandoning the use of the cocaine, the vomiting was at once renewed.—*L'Abeille Médicale*, April 6, 1885.

II. — G Y N E C I C .

“Operation bei Pruritus Vulvæ.”—*Centralbl. f. Gyn.*, No. 12, 1885.

Küstner agrees with Schroeder that the results of operative treatment of pruritus vulvæ are encouraging, and publishes the following cases:—

I. The patient, who was unmarried, suffered for a long time from uterine catarrh and pruritus vulvæ. The former was relieved after prolonged treatment, but there still remained two symmetrical spots between the hymen and labia minora which were the seats of most troublesome itching and were exceedingly sensitive to touch. These portions of the mucous membrane were rich in sebaceous glands, and were also studded with small retention cysts. The author dissected off two elliptical por-

tions of mucous membrane, each about 1 cm. broad and 3 or 4 cm. long, and containing the small retention cysts, and united each wound with interrupted sutures. The pruritus quite disappeared, and did not again return, though some years after the patient again suffered from uterine catarrh.

1. *Æt.* 36, unmarried, suffered also from uterine catarrh and pruritus. The catarrh did not yield to treatment, but the author operated for pruritus as in the first case, but rather more extensively. Shortly after the operation the condition was improved but not cured, but in the following year the pruritus had quite disappeared, though the uterine catarrh still persisted.

3. *Æt.* 48, married, complained of metrorrhagia and pruritus. The cervix was enlarged and somewhat suspicious, and was amputated high up. The metrorrhagia ceased, but the pruritus became so bad, in spite of irrigation with various remedies, that the patient became quite melancholic. The urine contained neither sugar nor albumen. Examination showed that the perineum had been torn half way through in a previous confinement, and that the somewhat pale mucous membrane covering this defect was the chief situation of the disease. The operation of repair of the perineum was performed and primary union obtained, with the result that the pruritus disappeared permanently.

This list does not include a number of cases in which the author operated for carcinoma of the vulva accompanied by pruritus. In one of these cases the chief complaint of the patient was the pruritus.

The author does not as yet lay down any definite rules as to how and in what cases operative treatment should be had recourse to. Many cases are caused by abnormal discharges, owing to vaginal or uterine catarrh, and the first indication is to get rid of these. After a time, however, pathological changes are produced in the vulvar mucous membrane so that we find an excessive number of small sebaceous cysts, thickening of the mucous membrane, ulcerations, eczema, herpetic eruptions, or boils.

In the author's experience, the operation for carcinoma of the vulva has been so constantly followed by disappearance of pruritus, that he now asks whether the pruritus, in those cases where secondary changes have occurred, cannot be definitely cured by excision of the affected mucous membrane.—*Med. Chronicle.*

III.—DISEASES OF CHILDREN.

On the Cause and Prevention of Ophthalmia Neonatorum.—Dr. Haab in his paper (*Correspondenzblatt für Schweizer Aerzte*) strongly advocates Credé's method for the prevention of ophthalmia neonatorum. Credé's method of proceeding is as follows: After the child has been washed in the usual way he wipes the eyelids with a piece of cloth dipped in clean

water, and then puts a single drop of a two per cent solution of nitrate of silver into each eye. For this purpose he uses a glass rod round and smooth at both ends.

Dr. Haab then proceeds to show by statistics collected from some of the largest lying-in institutions on the continent the value of taking these precautions. Before their use, 3,845 out of 42,811 children, or 9 per cent., suffered from inflammation of the eyes, while after their use only 109 out of 10,521 children, or 1 per cent., suffered. Of the 10,521 cases recorded since the date of the adoption of Credé's method no less than 5,100 have been treated by Felsenreich of Vienna. In the remaining 5,421 cases the percentage of inflammation is as low as 0.4, the greater frequency of inflammation in Felsenreich's cases being probably due to the fact that the number of cases treated by him was so great as to render difficult the thorough carrying out of the precautions. If cases which commence eight or ten days after birth are not taken into account the percentage is less, and it is right that such cases should not be included in the statistics as in them the contagion is attributable to carelessness.

Credé's method is compulsory in all the lying-in and foundling hospitals in Lower Austria, and Dr. Haab recommends its general adoption. The method practiced by Credé does not injure the eyes, and any midwife who had been taught to carry it out could be entrusted with a two per cent. solution of nitrate of silver.

Dr. Haab describes two kinds of ophthalmia neonatorum—first blenorrhœa, as he calls it, and second, catarrh. He asserts that blenorrhœa is invariably caused by gonorrhœal poison, except in those very rare cases where contagion is carried from one child to another, and he quotes Zweifel's experience in support of this view. Into the eyes of six newly born children Zweifel put some normal lochial discharge, and no blenorrhœa occurred, irrespective of whether the discharge was three or fourteen days old, bloody, serous or purulent. The lochial discharge of women who had suffered from leucorrhœa caused no blenorrhœa, and Zweifel was in consequence led to form the opinion that gonorrhœal poison alone is the cause of blenorrhœa. Credé is of the same opinion, and he agrees, too, with Noeggerath of New York, who first showed that most acute and chronic inflammations occurring in the genitals of women are due to gonorrhœal contagion, not necessarily to an acute gonorrhœa, but to a gleet or a so-called latent gonorrhœa of which the symptoms have long since disappeared.

If Credé's precautions merely warded off blenorrhœa he would not give a favorable prognosis for their general use, but they do more than this. They check in the bud the catarrh of new born children, which has nothing to do with either blenorrhœa or gonorrhœa. This catarrh, which may be mucous or purulent, generally runs a tedious course. The more

severe form—the purulent—is generally mistaken for blennorrhœa. In the earlier stages the two are much alike, and can frequently be distinguished only by microscopic examination, the absence of gonococci being characteristic of catarrh. At the same time a good deal of swelling and redness of the lids, swelling and hyperæmia of the conjunctiva, and a pretty copious and purulent discharge are present.

With proper treatment blennorrhœa neonatorum is cured in most cases in three or four weeks, but occasionally a purulent discharge with gonococci is found after six or eight weeks. Dr. Haab records cases of complete cure after seven to eleven days' treatment, whereas on the other hand the catarrhal form has been observed to last more than three weeks in spite of all treatment. This catarrh is often mistaken for blennorrhœa unless the discharge is examined for gonococci, and Dr. Haab is of the opinion that children with catarrh are often infected with blennorrhœa from the use of brushes, etc., which have been used in cases of blennorrhœa. Without microscopic examination it is impossible to distinguish catarrh from blennorrhœa in the first stage. The difference is usually marked in three to five days, the symptoms in blennorrhœa being most severe.

The tenacity of the eschar after burning with nitrate of silver is characteristic of catarrh when the secretion is not very copious. In catarrh there is not such an abundant flow of pus when the eyelids are separated as in the higher grades of blennorrhœa, but now and again quite as much as in the lower. Catarrh commences later than blennorrhœa, as a rule from the fifth to the twelfth day after birth, seldom on the third. It generally attacks both eyes, and while it has been cured in five days by proper treatment, it sometimes, and in spite of treatment, lasts four or five weeks, and in such cases, during the last fourteen days the discharge is scanty and purulent, but no gonococci are to be found. If left untreated, such a catarrh, when the discharge becomes purulent, might last more than six weeks.

Since 1881 Dr. Haab has observed eight cases of purulent catarrh in newborn children. In none were gonococci to be seen. Mild catarrhs with slimy secretion, which are frequently seen in infants, are not considered in the foregoing statement. In these eight cases the secretion was purulent, and the appearances were similar to those of blennorrhœa. During the same time Dr. Haab has observed and treated sixteen cases of blennorrhœa. In fourteen of these cases he had the opportunity of examining the secretion, and gonococci were found in all. In eight of these cases the course was observed to the end. Four weeks was the average duration, while in three cases it was only two weeks. One remarkable case was cured by the fourteenth day of disease and ninth of treatment, but Dr. Haab does not venture to say that this remarkably rapid cure was due to the treatment. In the above average one case was ex-

cluded on account of its exceptionally long duration. Gonococci were found in the discharge after three and a half months. In this case strict treatment could not be carried out.

The child was weakly and premature, and it suffered from diarrhea, abscess in the back, etc., and was several times at death's door. The discharge more than once ceased, only to recur in a few days. In spite of the long duration and all other difficulties, the eyes in this case were not lost. The corneæ of both eyes were affected, and an inconsiderable macula was left on both.

The practical result of Dr. Haab's paper is as follows :

1. Crede's method should be used generally, and not only in lying-in and foundling hospitals, but also in private practice.
2. Midwives should be taught how to practice this method.
3. So long as ophthalmia neonatorum exists, a microscopic examination of the discharge in all cases of inflammation of the eyes in newly born children is indispensable, in order to make an early diagnosis between blennorrhœa and catarrh, and to treat accordingly.—*Manchester Med. Chronicle.*

Bibliography.

The International Encyclopædia of Surgery.—A systematic treatise on the theory and practice of surgery by authors of various nations. Edited by John Ashhurst, jr., M.D., Prof. of Clinical Surgery in the University of Pennsylvania. Illustrated with chromo-lithographs and woodcuts, in six volumes. Vol. V. New York, William Wood & Co. 1884.

Vol. V of this great encyclopædia fully maintains the high character achieved by preceding volumes not only as regards the discussions of the various subjects, but also in the general arrangement and make up, the typography, etc. The regions of the body are discussed in succession commencing at the head.

The first article by Charles B. Mancrede, M. D., treats of injuries of the head. Commencing with the anatomy of the part, he points out some special features of cranial aponeurosis, a knowledge of which is often necessary in diagnosing subaponeurotic collections of pus from erysipilas. Thus the attachments, front and rear, are referred to as indicating the level to which fluid collections under the scalp may descend. Punctured wounds of the scalp are most liable to be followed by trouble, but extensive lacerations and loss of scalp may be followed by recovery, "even complete scalping with removal of the pericranium may be recovered from. The knife and scissors are forbidden in lacerations of the scalp as the most ill appearing flaps generally recover perfectly. The approximating scalp wounds sutures are rarely recommended, preforated shot ap-

plied to the hairs on each side, and strips of gauze with collodion being considered easier of application and better. Considerable space is devoted to the subject of fractures of the skull. The comparative anatomy of the skull at different ages is fully discussed and the various means and methods of its fracture followed up from the questionable fracture in utero to that which age renders not only possible but easy. The author emphasizes the fact that the fracture is of secondary importance, the condition of the underlying nervous structures being always first.

One important opinion in the treatment of fracture of the skull which the author gives with great deliberation, is that pertaining to making a compound out of a simple fracture. In simple depressed fracture, whether symptoms of brain compression exist or not, he would elevate to avoid the risk of epilepsy etc., following. The use of the trephine is favored as being comparatively harmless, allowing sufficient room for removing foreign bodies, and giving free vent to accumulations.

Basal fractures are recognized by prolonged hemorrhage from nose pharynx or ears; escape of watery fluids from these parts; paralysis of certain cranial nerves; escape of brain substance. Fractures of this region of the skull may unite after a long time, but such complete recovery is rare.

Traumatic cephalhydrocele happens mostly in the very young; and in simple fracture, results fatally in one half of the cases, but in compound fracture only one third die; the former from sucephalitis, the latter from cerebral abscess. Separation of the sutures is the result of a powerful diffused force, and generally necessitates a grave prognosis.

Wounds and injuries of the meninges and brain are next discussed with citations of cases illustrating the conditions. As it was before remarked that injuries of the brain substance were first in importance. The author has carried out this idea in the text as considerable more space is devoted to this part of the subject. Among the sub-divisions, may be found extravasation between dura mater and skull. Hemorrhage into pia mater. Hemorrhage into brain and ventricles. Wounds of venous sinuses. Concussion, contusion, compression and laceration of brain. Hernia of brain. Foreign bodies in brain. Pachymeningitis, arachnitis and cerebritis, cerebral abscesses.

Cerebral localization and trephining come in for a full share, and trephining for epilepsy is not omitted. By the latter, 48 cases out of 82 were cured, 13 were relieved, 4 were not improved and 17 died. Injuries of the cranial nerves are discussed in the order which they occur, and short reference is made to the secondary affections of the brain.

The article on malformations and diseases of the head by Frederick Treves, F. R. C. S., comes second in the volume, and completes the surgery of the head from the point left off by the preceding one. According to the text the diseases of the scalp are erysipelas, cellulitis, ab-

sciss, ulcers, anthrax, gangrene, tumors, pneumatocele, hæmatoma, cephalhæmatoma, internal cephalhæmatoma, intracranial venous blood tumors, follicular, dermoid, and serous cysts, vascular tumors of scalp, cirroid and other aneurisms. The malformations of the skull of interest to the surgeon are nearly all congenital, and are generally of three varieties. Meningocele, encephalocele, hydroencephalocele. Disease and tumors of the skull, fungus of the dura mater, intracranial aneurism, chronic hydrocephalus, and external hydrocephalus complete the list of headings, discussed at the close of the article is a general scheme of tumors of the vault of the skull arranged for diagnostic purposes.

Next comes the article on injuries and diseases of the eyes and their appendages, by our townsman, E. Williams, M.D. This essay covers the ground in a most satisfactory manner, forming, with its numerous illustrations on wood and stone, one of the most attractive articles in the volume. The anatomy of the eye is beautifully shown by illustrations after Gerlach, Merkel, Ivanoff, Schultze, etc. Another important feature is the frequent occurrence of detailed clinical cases. Some very sensible remarks are devoted to the subject of how the ophthalmoscope should be used, from which it would appear that scarcely one in a hundred uses the instrument understandingly. The article occupies 121 pages.

Following Prof. Williams' essay is that of Albert H. Buck, M.D., of New York on injuries and diseases of the ear, occupying 70 pages of the text. To the many illustrations on wood are added quite a number of lithographs copied after Prof. Politzer's plates, representing the various conditions in health and disease of the membrana tympani.

The article on diseases and injuries of the nose and its accessory sinuses, by Geo. M. Lefferts, M.A., M.D., is fully up to the requirements of this improved and developing speciality. Special attention is of course paid to the surgery of the nose, injuries, tumors, etc., but the various forms of disease of the nasal passages are by no means slighted. Acute and chronic nasal catarrh in all their forms are fully discussed, along with representations of instruments used in their treatment.

It seems almost unnatural to separate diseases of the nose from those of the throat, but thus we find it in the work, the latter part of the subject (air passages) being disposed of by the able writer, J. Solis Cohen, M.D. This latter article is quite voluminous, taking up 169 pages, and from a casual examination we cannot say that as much is not said on this particular subject as in Dr. Cohen's large work.

It is certainly of the greatest importance to the practitioner to get books suitable for easy reference, and this may be specially urged as a characteristic of the work before us.

Injuries and diseases of the face, cheeks and lips, by Alfred C. Post, M.D., LL.D., deals mostly with the restoration of the lips for hare-lips or other deformity, or after removal of cancer. Numerous illustrations

are interspersed in the text. This article has one colored illustration on stone, showing a case of epithelioma of the face.

Next in order comes injuries and diseases of the mouth, tongue, palate and jaws, by Christopher Heath, F.R.C.S., and following are surgery of the teeth and adjacent parts, by Norman W. Kingsley, M.D.S., D.D.S., and injuries and diseases of the neck, by Geo. H. B. MacLeod, M.D., F.R.C.S., F.R.S.

The remaining articles are, injuries of the chest, by Edward H. Bennett, M.D., F.R.C.S.I.; diseases of the breast, by Thos. Annandale, F.R.C.S.E.; injuries and diseases of the abdomen, by Henry Morris, M.A. and M.B., Lond., F.R.C.S.; and hernia, by Jno. Wood, F.R.S., F.R.C.S. To these we hope to return again before long.

The volume as a whole cannot be too highly spoken of, and we heartily recommend it to the profession.

Minor Surgical Gynecology.—A Treatise on Uterine Diagnosis and the Lesser Technicalities of Gynecological Practice, including general rules for gynecological operations and the operations for lacerated cervix and perineum, and prolapsus of the uterus and vagina. For the use of the advanced student and practitioner. By Paul F. Munde, M. D., Professor of Gynecology at the New York Polyclinic and at Dartmouth College, Obstetric Surgeon to Maternity Hospital, etc. Second edition, revised and enlarged. With 321 illustrations. New York: Wm. Wood & Co.

When the accomplished and experienced editor of the *American Journal of Obstetrics*, wrote the first edition of his *Minor Surgical Gynecology* for "Wood's Library of Medical Authors for 1880," this volume was at once recognized as filling a want hitherto felt in gynecological literature, at least of that published in this country. Just as a knowledge of the minor details of surgery, as dressings, the art of bandaging, etc., must precede the practice of general surgery, so a thorough acquaintance with all the minor manipulations and appliances is necessary for the application of the principles of gynecology proper. If the author had already so well succeeded in his first work, this second edition shows a decided improvement over the former, not only that it has been thoroughly revised, but also considerably enlarged by the addition of new matter and illustrations. The text is clear and explicit; in fact if we have any fault to find, it is in the recurrence of frequent repetitions, but the author on every occasion reminds us that he is not addressing the experienced gynecologist, but the inexperienced student and general practitioner, upon whom he cannot impress important points too often. The matter contained in this book is entirely practical, from beginning to end; all the directions given are trustworthy and attested by daily clinical experience. Most of the details will be looked for in vain in larger and more pretentious works

on gynecology, and yet they are none the less important for the intelligent and successful practice of this department of medicine and surgery. In order to show the thoroughly practical character of the work we cannot do better than give a succinct description of its contents. The book is divided into three parts, of which the third is new in this edition.

Part I. Is entirely devoted to the subject of "Gynecological Examinations," giving an exhaustive description of all the means and instruments required for the purpose of diagnosis in disorders of the womb and adnexa. Besides a minute description of all the gynecologist's paraphernalia usually also found in other text-books (although in these not at such length), several new subjects are introduced, as the disinfection of instruments, the cleaning of sponges, artificial illumination (electric light), etc.

Part II. Forms the bulk of the book and embraces that portion of gynecology, for an elucidation of which, namely, "Minor Gynecological Manipulations and Appliances." It is in this part we chiefly find those valuable hints for which we look in vain in the regular text-books of gynecology, and which nevertheless must once be learned, if we wish to save ourselves much annoying experience to be derived otherwise only from clinical practice. Already the first chapter—catheterization—gives us some simple and clear rules how and when to use the catheter. Every young practitioner will testify with what difficulty this knowledge and dexterity in the use of the instrument are frequently obtained. None the less important and interesting are the following chapters on dilatation of the urethra and injections into the bladder. Then we have long and exhaustive dissertations on the application of medicinal agents to the vagina and cervix; tamponade of the vagina, its methods and indications; applications to the endometrium; dilatation of the uterus, without and with cutting instruments; curetting the uterine cavity; local depletion of the uterus; injection of medicinal substances into the tissue of the cervix and vagina; reposition of the displaced uterus; pessaries—these two chapters are treated in a manner more elementary and conclusive than to be found elsewhere—closing with a chapter on the hypodermic injection of ergot.

Part III. is, as has already been stated, entirely new, and elevates the work above the rank of a mere treatise on Minor Gynecology, as it discusses at full length such important operations as those for lacerated cervix lacerated perineum, prolapsus of the uterus and vagina, with their concomitants; urethrocele; cystocele, and rectocele. We do not remember having read anywhere so precise and yet so clear descriptions of these operations as in the work before us. The chapters on lacerated cervix and perineum, though reminding us of Emmett, are more readily understood and the illustrations more graphical than in the last mentioned classic work. In fact, the objection urged against Emmett's work by some that it is not sufficiently elementary for the student and general practi-

tioner, is obviated by associating with it this elementary treatise of Mundé. Some of the operations for prolapsus of the uterus and vagina, and especially on cystocele, are not to be found in most other English or American works.

We only regret that the scope of this book did not permit the author to enter into a discussion of other gynecological operations, as vesico-vaginal fistula, etc., but he holds out the promise to us that at some future time he will prepare a complete work on gynecology, a hope that we wish soon to see realized, and which we trust will meet with as much favor as is shown the present work of the author.

We premise for this highly interesting work a rapid sale, especially since this second edition has been divorced from a host of other books which had to be purchased with it to obtain the first edition. Not only will the "advanced student and general practitioner," for whom, as the author states in his preface, the book was written, refer to it constantly and study it carefully before entering upon the practice of gynecology, but even the specialist may occasionally turn with profit to its pages to find certain points and methods of treatment which will perhaps be found new to him.

The typography and illustrations (with a few exceptions) are as excellent as the text is clear and readable.

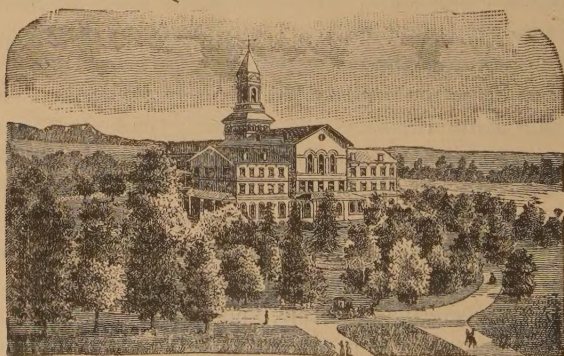
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